

LIBRARY RESOURCES & TECHNICAL SERVICES

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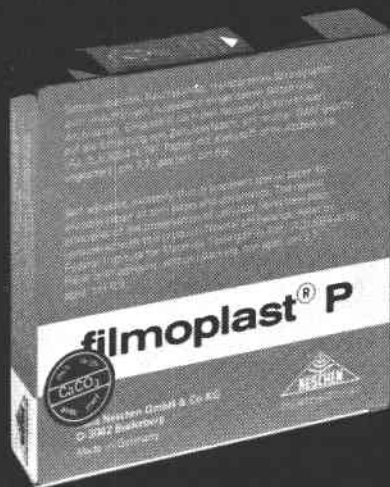
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Editorial:

Looking Back, Looking Forward

With this issue, my term as editor of *LRTS* comes to an end. It has been an exhilarating experience, a time of intellectual and professional growth, and an opportunity to work with many interesting colleagues, whose ideas and articles taught me much about my own field. It has been very much like taking a long journey in which I have covered uncharted territory, discovered new horizons, and crossed the most varied and fascinating terrain. Each article presented new ideas. My job has been to understand them and their context, and to assist their authors in bringing the ideas into the scholarly public forum we call *LRTS*.

Looking back, many highlights warm the memory: Winners of the "Best of *LRTS* Award"—Roxanne Sellberg's "The Teaching of Cataloging in U.S. Library Schools" (Jan. 1988) and Joe A. Hewitt's "On the Nature of Acquisitions" (Apr. 1989); the news columns, written first by Verna Urbanski and later by Cecilia Piccolo; the *LRTS* Subsections, "High-Tech Shopping for Serials Automation," edited by Pamela Bluh and Will Hepfer, and "Shall We Throw Out the Technical Services?" edited by D. Kathryn Weintraub; the enormously useful "Year's Work" articles upon which many of us depend to keep up with the literature in our interest areas as well as those that surveyed the literatures of nonbook processing, circulation control, automation, and research for the first time; growth of the book review section, under the capable editorship of Richard Johnson; the many brief, topical "Notes on Research and Operations"; and the special automation issue (Oct. 1988), overseen by Assistant Editor for Automation Joe Matthews.

"Interactions"—letters to the editor—were particularly enjoyable, not only because the lion's share of letters received complimented the journal, but because Marvin Scilken and others like him kept up an ongoing dialogue on issues of importance. Sparking debate and furnishing an encouraging environment for it also is a function of a scholarly journal.

Working with our dedicated and hardworking editorial board has been a rewarding experience. All the names on the masthead are people who contribute many hours of their time to *LRTS* as do the referees, the ALA production staff, and the ALCTS staff. My special thanks go to Edward Swanson for indexing each volume. His contribution is a boon to us all.

Looking forward into this issue, there are five "Year's Work" articles, by Denise Kaplan (automation), Susan Davis (serials), William Schenck (collections), Carlen Ruschoff (descriptive cataloging), and Stephen Hearn (subject analysis). The date of Schenck's survey—1988—is not an error; acquisition and collection development librarians will be pleased this gap is now filled, while the 1989 survey will appear soon. Articles

about approval plans by John Calhoun, James Bracken, and Kenneth Firestein, serial links by Tom Delsey, standards by Sally McCallum, catalogers' status by Patricia Eskoz, preservation photocopying by Gloria Orr, AACR2R's indexes by Bella Hass Weinberg also appear, and Liz Bishoff's closing article in Weintraub's subsection rounds out the issue.

Finally, it is my pleasure to bid you goodbye, good reader, and ask you to welcome to the editor's chair beginning with the next issue a fine writer, esteemed colleague, and good friend, Richard P. Smiraglia. *Bon voyage, Richard.*—*Sheila S. Intner, Editor.*

IN MEMORIAM: REMEMBERING ELIZABETH RODELL

"Elizabeth takes you gently by the hand and she leads you here and she leads you there."

So wrote Paul Dunkin in recollection of his first Midwinter Meeting as vice-president of RTSD. May his affectionate tribute serve to remind us of the quiet efficiency of Elizabeth Rodell, executive secretary of RTSD 1961–1968, deceased in Texas October 24, 1989.

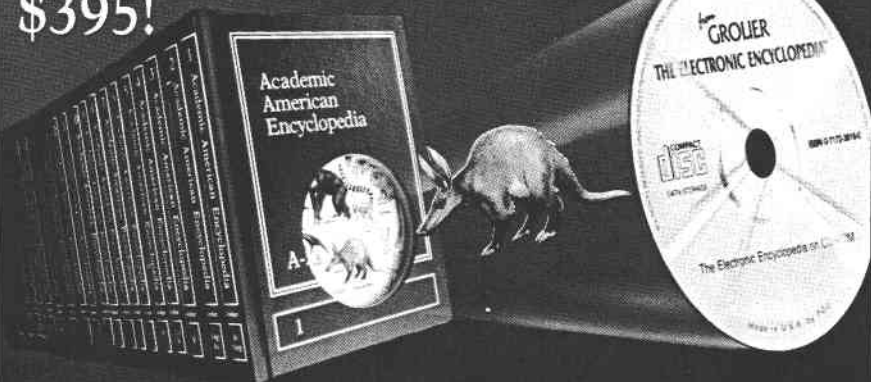
RTSD's agenda in the 1960s was full and urgent, with such complicated and formidable topics as "National Union Catalog Pre-56 Imprints," "PL 480" regional processing centers, standards for binding, filing rules, and technical services cost ratios, let alone catalog code revision and the initial impact of automation on American libraries. Whatever the subject, division officers could count on "ER" to keep us informed and up to date. And, further, to remind us often of other important matters: the needs of small libraries, the lack of division members in small libraries, the need to assist the librarian "becalmed in some backwater"—items all too easily forgotten in the crush of research-library-oriented topics.

Elizabeth's concern for persons and institutions likely to be overlooked because of the demands of the immediate agenda came as no surprise to those of us fortunate enough to count her as friend and to know the warmth of her personality. Add her unfailing composure, her sense of humor, her soft Texas drawl, and you have the very model of a modern executive secretary.

In the words of another contemporary, Esther Piercy, it was "good having you aboard, ma'am."—*Wesley Simonton, President, RTSD 1965/67.*

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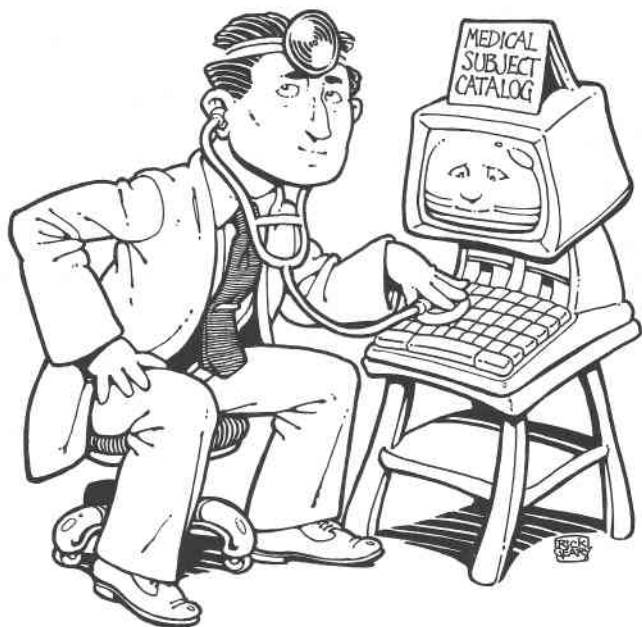


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The Year's Work in Technical Services Automation, 1989

Denise P. Kaplan

This article provides a different perspective than the other "Year's Work" articles. For the first time, each technical services area is viewed only from the aspect of automation. The reader might ask, of course, if there is any area of technical services not affected by automation. The answer in 1989 is no.

While automation solves some problems, it creates others. Duplicate or triplicate data entry of bibliographic information for acquisitions, cataloging, and circulation was not uncommon in the early days. A solution was desperately needed to streamline workflow. It came in the form of system interfaces and then integrated systems. The existence of MARC cataloging and its acceptance as the de facto standard provided the foundation for the library's integrated database.

Changes in the technical services work environment are not simply the result of outside factors. Technical services librarians are themselves change agents, having initiated and managed the transition from manual to automated systems. (Dumont) This transition has placed many demands upon staff, including analyzing, learning, teaching, and managing these new systems. In some cases, responsibilities have included designing and/or debugging the system. With the experiences and scars of veterans, technical services librarians share their expertise when the library expands its automation throughout the organization.

Maliconico discusses the current environment of libraries and, by implication, technical services: "New technologies have changed the way libraries operate and are managed. They have put enormous power at the disposal of both library managers and operating staff" (Maliniconico). The power of these opportunities and these options is presented below.

This article defines technical services in its traditional sense: acquisitions, cataloging, processing, and serials control. Topics such as circulation, online public access catalogs, and preservation are not covered. With each article, the author has made a judgment as to whether the focus is the *automation* of the technical service. For example, the user retrieval problems of online catalogs were not considered relevant, but the process of creating the online catalog was.

Denise Kaplan is Assistant Director of Lincoln Library, Springfield's public library in Illinois. Her responsibilities include technical services and automation. The author gives special thanks to the interlibrary loan staff: Jeanne Kains, Lincoln Library, and Pam Ewing, Rolling Prairie Library System.

This article does not seek to be comprehensive. It concentrates on English-language articles published during 1989 judged to be significant and thought provoking. Press releases and product announcements are not included, but independent product evaluations are covered.

AUTOMATION OVERVIEWS

The possibilities and practicalities of library automation are comprehensively covered by Saffady's *Introduction to Automation for Librarians*, second edition. This revision of the 1983 predecessor is divided into two parts, the first covering system fundamentals and the second dealing with library applications. Part two devotes three chapters to automated cataloging, descriptive cataloging, and catalog production; automated acquisitions; and serials control. For a shortened overview, the reader should consult Saffady's *Library Trends* article. The major areas and motives for automating are outlined, while the current dominant approaches are illustrated by representative products and functions. A picture of technical services automation for microcomputers is given by Manson. With a focus on the United Kingdom marketplace, she discusses systems for cataloging, circulation, and acquisitions.

ACQUISITIONS

Acquisitions receives relatively little attention in the library literature compared to cataloging. Two monographs published this year look at the topic of acquisitions as a whole, a valid approach. Eaglen's how-to-do-it manual devotes a chapter to automated acquisitions, but the coverage is deceptive. Most of the chapter covers the Cuyahoga County experience, which is not necessarily relevant elsewhere. Eaglen's two pages of the important automation lessons she learned on the job are most valuable and generally applicable. The second edition of *Acquisitions Management and Collection Development in Libraries* obviously serves dual purposes. Authors Magrill and Corbin devote most of the text to acquisitions. Automation issues, such as electronic ordering, standards, computerized information, are discussed.

Vertrees gives a first-hand account of the automated batch systems used by the Chicago Public Library to handle the funds and orders of 120 separate units while looking forward to needed features in a future online system. Lacking mainframe resources, Lee describes the efforts to automate fund accounting, order records, order slips, and statistical reports using dBase III and Lotus 1-2-3 on a microcomputer. While the project successfully improved operational efficiency and effectiveness, it was, according to Lee, only a step toward automation on an integrated system.

Keder addresses the initiation of orders. The BOOKORDER program at Colorado College offers its faculty, staff, and administration the option of electronic book ordering complete with a "thank-you" receipt via the campus mail network.

Online ordering to vendors represents the current trend for faster, more efficient buying. Schuyler describes the system offered by Midwest Library Services, including its ability to download source records from the utilities and CD-ROM products.

CATALOGING

The major function of automated cataloging is the creation of machine-readable cataloging, and MARC remains the little disputed standard. Rather and Wiggins show a personal and important historical perspective profiling Henriette Avram. *MARC for Library Use* (Crawford) provides a basic, clear introduction to the subject for all librarians. This update of the original 1984 monograph has been expanded to include separate chapters for each of the MARC formats. Crawford actively promotes format integration, echoing Avram's regret over the proliferation of formats. The MARC record as a flexible and standard conveyor of bibliographic information is validated by Hinnebusch, who advocates the extension of the MARC record into a hierarchical structure capable of handling vertical, horizontal, and chronological relationships.

The costs of copy cataloging are identified and analyzed by Saffady for the entire variety of products available: utilities, CD-ROM systems, and online and printed cataloging tools (Saffady A). The comparative unit cost calculations are must reading for anyone involved in budgeting for cataloging.

The bibliographic utilities as primary sources of MARC cataloging remains a popular topic of investigation. Intner conducted a study of 215 matched pairs of entries in OCLC and RLIN for comparison of accuracy and fullness. The quality was shown to have no significant difference despite generally held notions in the library community that there are differences. Based on finding a large percentage of errors in both databases, Intner does have valuable recommendations for reducing the number and types of errors (Intner C,D).

Looking at specialized Chinese, Japanese, and Korean (CJK) capabilities, Wei and Noguchi compared OCLC and RLIN experiences at the University of Illinois. Illinois used both systems as a regular RLIN user and as an OCLC test site. The authors compared the CJK systems on hardware, software, searching capabilities, card production, and authority control. Nichin also addresses OCLC's CJK cataloging system but takes a broader view by defining problems and answers to automated foreign-language cataloging.

A common practice among OCLC users is saving marked OCLC printouts representing edited versions of master records for future reference. Ballard suggests replacing the paper printouts with a computerized substitute. She explains how to create batch files for edited Micro Enhancer records on disk and diskettes.

Local cataloging options, particularly CD-ROM products, are now viable competitors to the utilities. How to choose a system is the predominant theme of the year. An overview of the three major cost areas to consider when choosing between a utility and a CD-ROM system is given by Chao. Bills and Helgeson examine seven systems. LaserCat and Bibliofile were found to be complementary, not competitive, by Brennan. Strengths and weaknesses were determined through use of both systems in a small public library. Morrow reviews the hardware, software, and functionality of Gaylord's recently introduced cataloging workstation, SuperCAT. Voedisch, from OCLC, gives an overview of her company's CAT CD450

cataloging system including software, hardware, and system capabilities, as well as users' frank reactions to the product.

The American Theological Library Association employs a unique and complex method to create MARC records (Knop, Baker, and Fieg). Bibliographic and authority files are entered using WordPerfect word processing software. These files are converted to MARC, edited, then output to tape for loading into OCLC, RLIN, UTLAS, NUC, or local systems. Arokhaar and Traxel also have an innovative way for creating OCLC MARC records. They use ProComm for downloading OCLC records, uploading holdings and originally created records on dBase III+ back to OCLC. Routines for the communication program are given.

Lest we forget, libraries do still have card catalogs. Konneker and Konneker outline selection and operational criteria for card processing programs, while Turitz reviews the software program developed by the Konnekers.

While many libraries have solved the problem of ongoing MARC cataloging, the retrospective conversion of existing records still remains. *Retrospective Conversion: A Practical Guide for Libraries* is just that (Beaumont and Cox). The book covers the topic in its entirety, from the planning stage through implementation and afterwards. Bibi emphasizes the need to analyze the library's current situation and future needs in choosing the means of conversion. He explains BRAZNET's choice of the Laser Quest CD-ROM product for an inexpensive and fast conversion handled by library staff. When original inputting of records is preferred, MITINET running on a microcomputer may aid untrained staff (Epstein). The MITINET/MARC system translates user input into MARC records without the user learning MARC terminology and codes. Retrospective conversion of bibliographic records can require repetitive data entry. Lager found that Borland's Superkey program for macros used with OCLC's Microcon service for retrospective conversion and reclassification significantly reduced repetitive keystrokes.

A library's existing records may be in a computerized form but still require further conversion (as in the cases described by Enssle and Anderson, and Winter). The method chosen to convert such records is a major decision concerning time and money. Hanson and Pronevitz performed a simulation of the OCLC TAPECON to evaluate its suitability for converting the circulation records at Ohio State University. Special retrospective conversions concerns are addressed by Tull for government documents and Stachacz for periodicals.

Authority work has been the subject of much attention. Kranz and Dalehite guide the reader through the decisions and specifications needed to procure authority processing from a vendor. Johnston's overview and overall ranking of sixty-six vendors' systems and services on the sources, management, and use of authority records supplies shoppers with comparative data. Stone reports using one such vendor with a resulting low cost per corrected record.

Automated authority control can be implemented on a local system. Rogers (LCS), and Fox and Kanafani (NOTIS) describe local automated techniques for improving global updating in their systems. Online help screens and messages were created to assist one cataloging department

when entering authority records into a CLSI system (Bross).

The collection of papers in *Authority Control in the Online Environment* offers a wealth of information along with inspiration. The collection's limitation to only name and title authority control sharpens its focus and leaves room for (hopefully) a companion volume on subjects. Papers fall roughly into two categories: considerations and practices. Tillett defines authority control in a historical perspective and suggests a taxonomy for name relationships. Delsey covers the history of IFLA's involvement and promotion of Universal Bibliographic Control for authorities and authority control. Taylor considers the research and theory in authority control.

The use of the Library of Congress Name Authority File (LCNAF) on RLIN was investigated by Dickson and Zadner, who concluded that a separate authority file may not be the best source for verification and resolution of heading conflicts. A sampling of the University of Chicago general catalog was undertaken by Fuller to determine the number and type of differences appearing in personal names in different forms of the authors' works. Smiraglia examines the functions of uniform titles in music and looks to the future for linking between authority records for works and bibliographic records, as well as among authority records. Local authority control on specific integrated systems is discussed by Kirby for NOTIS, by Goldman and Smith for NOTIS, by Ridgeway for GEAC, and by Gibbs and Bisom for ORION. The structures and examples from specific systems are useful for evaluation of one's own authority control procedures.

Library of Congress Subject Headings are now available on CD-ROM. Joy and Keane look at the product as a source of records for authority control, concluding it is helpful and worthwhile. They describe the CD-ROM installation procedures, the organization of subjects, and search capabilities with illustrations of screen displays. Dwyer warns against loading LC authority tapes without examination and/or editing. Some LC cross-references, especially for variant foreign language forms, are of questionable value, and may confuse patrons.

One of the joys of cataloging with automated authority control is the capability and power for making global changes. Peterson illustrates that decisions are made most effectively on an individual title basis.

Changing standards and procedures for quality control of bibliographic records have come as a result of the automated environment. Hay notes three major areas of change: the ease of creating bibliographic records, identifying and correcting problems, and automated authority control. Bibliographic maintenance, unlike authority control, does not lend itself to global updates. Other techniques must be investigated for time-saving devices, and the microcomputer is the logical choice. A microcomputer menu interface to the LCS system allows faster and easier input and data correction (Henigman). The system's expanded programs are also used for pre-AACR2 heading corrections, call number creations, and circulation/bibliographic record linkages.

Much was written in 1989 on the online public access catalog (OPAC), but rarely was it from the technical services perspective. Allen is an exception with his focus on the cataloging policy and catalog production of a bilingual online catalog.

Priorities and work loads may delay or prevent the full cataloging of

government documents at some institutions, thus forcing librarians to look at other alternatives. Becker was interested not only in the technical processing but in providing patron access to files. She describes an automated shelflist of government documents by which patrons can access full bibliographic information. The shelflist is seen as an interim measure until a better catalog is installed. Stwalley, like Becker, chose a microcomputer system for documents. Stwalley explains the development of a classification scheme for municipal documents as well as the creation of the database with listings by shelflist, title, and subject.

A thirty-year history of Judaica cataloging is presented by Weinberg. She deals with automation and cataloging changes in relation to Romanization and the Hebrew character set, classification and subject analysis, and shared cataloging. She concludes that more change is inevitable in the on-line environment.

Tell looks to alternative cataloging methods for developing countries, but his remarks are applicable to any cataloging backlog. He suggests short bibliographic entries aided by Hypertext.

Bryant muses philosophically on the problems of serials cataloging. He looks to technology for solutions to cope with the past and deal with the future.

The challenges and opportunities for cataloging archives and manuscripts are explored by Bearman as he reviews the experimental implementation of the MARC Format for Archives and Manuscript Control on RILIN by the Seven States Project. Honhart also looks at MARC:AMC as implemented on a microcomputer system at Michigan State University. Clark covers a project and process for cataloging historical research using the MARC format, LC subject, and name headings.

Management and professional issues are presented by Matthews in his description of using computers to enhance cataloging productivity. Daily problems and decisions catalogers face on the job are examined, and computer-based solutions using existing technology are offered.

The goal of all cataloging is to provide access to the cataloged materials. But does it? Intner introduces the concept of functional inaccessibility (Intner B). Library materials become functionally inaccessible after they go through the traditional bibliographic processes yet still cannot be found by the ordinary library patron. Intner gives succinct examples of the problem and solutions.

Two different aspects of their ongoing research are reported by Markey and Vizine-Goetz. They examine the problems of displaying general explanatory references and scope notes, which may not lead to posted headings in online catalogs and suggest manual and automated-assisted techniques to eliminate these blind references. They also detail the characteristics of machine-readable LC subject authority records.

If catalogers fear replacement by machines, they can be relieved to know that two expert systems could not handle all the AACR2 rules (Hjerppe and Olander). Hjerppe and Olander suggest limiting a system's knowledge base by type of material or part of AACR2 rules, advice already instituted by catalogers of specialized materials.

An OCLC research team conducted a feasibility study on automated title page descriptive cataloging. In addition to the problem of applying cataloging rules, the OCLC team looked at scanning the text, then translating it into a useful data structure. An ongoing study by Chan seeks to develop methodology for studying, then comparing, indexing consistency among MARC subject records.

Williamson reports on four papers that examine research dedicated to developing, handling, and maintaining classification in an automated environment (Williamson A). Topical coverage includes using artificial intelligence for bibliographic classification by Travis and computerization of the LC scheme by Williamson. Mandel discusses the implications for information processing. Williamson gives further detail about the progress of her research project on the development of a working version of a MARC format record for the Library of Congress Classification scheme (Williamson B).

SERIALS CONTROL

The control of serials for subscriptions, fund accounting, and holdings has always been a challenge. Goals for serials automation can be divided into four broad categories: database design, functionality, management capabilities, and user interface, according to Miller-McIrvine, who examines the problems in acquiring and implementing a system. Rush establishes criteria for hardware selection, but with the cautionary warning that it should follow the selection of software.

Two available kinds of serials control are compared by Hunt and Dyer. MicroLinx illustrates a stand-alone vendor system, while Bookshelf exemplifies an integrated system. The TVA Technical Library takes its serials control information one step further (Mills). The library translates the information contained on its EBSCO Subscription Service diskettes using dBase III+ into the subscription date and status for patron notices.

Contrasting approaches were chosen to implement online serials control on an integrated system at independent libraries within the same university (Martin and Rieke). Two Vanderbilt University libraries used different tactics based on differences in size, past cataloging, and current practices to achieve the same ends. Another transition to online serials control from a manual Kardex is described by Lowell.

The implementation of online serials control is not an end product, but a means to achieve more service. At Albany Medical College, an initial single workstation grew to a multiuser network over a three-year period (Geyer and Botta).

A specialized labor library solved the problem of controlling the serials of five regional offices across Ohio by creating a user-friendly, menu-driven system on the organization's existing computer (Pease).

Locally developed microcomputer applications in serials control are an attractive alternative to single-vendor or integrated systems. Shuster uses dBase III+ along with Lotus 1-2-3 for fiscal control of periodicals and standing orders. Hayman takes a design approach to show the advantages of using relational database file structures. Thompson describes the soft-

ware design on Professional File, the processing procedures, and the reports generated for government depository documents, a special case of serials control.

With any stand-alone system, the problem of sharing or integrating data with other library systems eventually surfaces. Greg Anderson presents the concept of modular interfaces whereby separate systems give the functional appearance of integration. To achieve modular interfacing, the University of Georgia Library is working with the Faxon Company to develop, test, and implement the exchange of detailed holdings data between the local online catalog and the MicroLINX system.

As part of the Southeastern ARL Libraries Cooperative Serials Project, Kim examines the issues of encoding retrospective serials holdings and locations. Kim lists problems and solutions, including specific changes required for computer manipulation of this information.

Networking and automation reveal one's past cataloging sins and practices for all to see. The special case of monographic series is examined as part of an evaluation project for analyzed series in the context of current and future automation at the University of Idaho (Steinhagen).

Automation of the claiming process can prove helpful or harmful. The advantages of using microbased software to record and then transmit claims through electronic mail for foreign journal issues are obvious. However, the lack of quality control in automated claiming can lead to unnecessary claims (Tonkery). Claims are produced based on programmed prediction records, which may be questionable given the irregular publishing patterns of serials. Dramatic increases in the number of claims are forcing some publishers to discard the first claim.

Three memorial perspectives on OCLC's Serials Control System (SCS) after its demise on December 31, 1988, are offered by Rast, Martin, and Scott. Automated serials control is summed up by Lowell's observation that "ongoing rethinking, recoding, and rekeying are essential, if one's system is to be wholly effective."

PROCESSING

The processing of library materials is by its very nature a physical activity. Nevertheless, even these activities can be made easier by automation. Three categories of automated systems for bindery preparation exist based on who the developer is, the bindery, a third-party vendor, or the library itself (Jacobsen). Problems associated with each kind of system are outlined by Jacobsen, who makes the case for the ideal—"seamless integration" of the library's local system, the library's bindery preparation system, and the bindery's system. This ideal is founded on two premises: that the library has machine-readable records for monographs and serials with serials checkin; and that standards be developed for binder preparation records.

TECHNICAL SERVICES

Morris and Barnacle describe the work environment of an automated technical services department. They review the health, safety, design, and organizational aspects of library automation. Their remarks are particularly relevant to staff who sit at terminals for significant amounts of time.

Most managers deal with the question of how many staff terminals are enough. Instead of determining purchases from staff demands, Reid, Anderson, and Schneider structured a study to get a better answer. With a methodology applicable to other libraries, they studied the usage of both OCLC and NOTIS staff terminals to provide needed data for optimum hardware configurations and scheduling.

A. J. Anderson presents the conflict between a library assistant and the supervisor of the bibliographic processing unit. The problem centers on whether the supervisor's electronic monitoring of the assistant's computer is an objective performance measure or a misuse of technology and ethics. The analyses provide controversial perspectives on a capability currently available in most automated technical services units.

The inclusion of circulation control as the third technical service, after acquisitions and cataloging, is argued by Intner (Intner A). With automated maintenance and retrieval of patron, bibliographic, and item files, circulation is as "technical" as the other technical services. Dumont begins his discussion of technical services entrepreneurship by including circulation. The wide-ranging scope of the database leads to questioning the very definition of technical services. In examining the effects of automation on the library organization, both Dumont and Gopen see technical services at the center. Dumont focuses on the technical services staff as change agents—innovative, creative, adaptable, and entrepreneurial. Gopen gives the results of a creative reorganization of technical services born from the parents of economic need and electronic information. The question is taken to the field by DeKlerk and Euster with a survey of fifty-three academic library directors regarding organizational change, including the restructuring of technical services.

The functional structure for technical services is explored by Cotta-Schonberg. Cotta-Schonberg proposes a service-oriented library organization whereby all departments have internal and external functions. Another option offers permeable department boundaries, allowing all staff to participate in direct service functions.

The creation of a single database used by both public and technical services staff is the impetus behind the new relationship between the staff (Neal). Staffing changes at Penn State University resulted in catalog librarians participating in reference, bibliographic instruction, database searching, collection development, and cataloging. While responsible to the bibliographic services unit, these librarians belong administratively to a public services unit. Cargill believes integration of public and technical services duties for librarians can enhance career opportunities while providing economic benefit to libraries. Adan reviews the reorganizations occurring in academic libraries, but she suggests other alternatives for smaller libraries. She also concludes that the traditional division between public and technical services is undesirable.

TRENDS

The year 1989 was a year of assessment in the automation of technical services. Librarians dealt less with the introduction of technology and more with its results. Previous years' themes of "how I did it good" are replaced by "how I survived the second time around" or "how I made it

work for me." Issues such as interfacing systems, expert cataloging systems, and reconversion of machine-readable records reflect this maturation. Second editions of classic monographs by Crawford, Saffady, and Magrill and Corbin appeared. These revisions updated and expanded the original versions including new and replacement technology, as well as each author's seasoned experiences.

The year's picture of automated acquisitions was less than well rounded. Noticeably absent was the implementation or evaluation of integrated acquisitions systems, other than Eaglen's, discussions on the effects of on-line ordering or reports on the introduction of CD-ROM products as ordering aids. Authority control was the dominant cataloging concern, with cataloging practices universally visible in the online public access catalog. Automated assembly lines for the sizing and adhering of book jackets, ownership stamping, and other processing functions remain the wishful thinking of many a manager.

The most significant issue of the year was the ongoing merging of technical and public service functions. As technical services is itself redefined in the light of technology, so are the responsibilities of its practitioners. Thus far, the changes have occurred mostly in academic and special libraries, where bibliographic instruction and original cataloging can be decentralized. How public libraries (where original cataloging and bibliographic instruction play minor roles) respond to automation needs deeper examination and reporting. No one style of organization was definitively accepted during 1989, nor will one likely be next year. Administrators, managers, and staff will continue to experiment based on their libraries' personnel, organizational, and technological needs.

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The Year's Work in Serials, 1989

Susan Davis

Articles on any aspect of serials in library and information science journals published since the last review were scanned for possible inclusion in this bibliography. While information on serials, especially serials pricing, has begun to appear in other fields, space considerations restricted my focus and prevented a comprehensive listing. Nevertheless, this year's work on serials is as varied as serials themselves. There is a lot of good reading ahead!

SERIALS PRICING

Once again the literature was dominated by the discussion of serials pricing, as well as related issues of scholarly communication, journal publishing, and the question of access versus ownership.

Several continuous sources of developments in this area are of note. Ivins' regular columns in *Serials Review* bring together reports on various meetings, conferences, studies, and other related topics. Two publications made their debut in 1989. The electronically disseminated *Newsletter on Serials Pricing Issues*, edited by Marcia Tuttle, is essential reading for up-to-the minute news. It, along with Katina Strauch's *Against the Grain*, a well-put-together newsletter on all aspects of acquisitions, often contains references to articles on serials pricing outside the field of librarianship. While beyond the scope of this article, these other citations merit investigation.

Astle nicely summarizes the problems, questions, and alternatives available regarding the increasing article output of the scholarly journal and its associated high costs. Tuttle provides a basic and brief overview aimed at nonlibrarians in *Library Issues*. Current activities on serials pricing are capsulated in another article by Astle. However, the really significant development of 1989 was the release of two reports commissioned by the Association for Research Libraries. Okerson and Economic Consulting Service prepared separate reports for the ARL Serials Project that should be read by librarians at all levels. Okerson has summarized both reports in the *Serials Librarian*. Whether or not you agree with the methods used or conclusions reached in these reports (read the many point/counterpoint communications appearing in the *Newsletter on Serials Pricing Issues*), they must be regarded as truly noteworthy for the strong stances their authors have taken on this issue.

The impact of serial costs on library budgets was the focus of several articles. Lynden finds both negative and positive effects and advocates reviewing collection development policies. A very fine bibliography can be found in Hamaker's examination of pricing by the top six publishers. He draws a number of interesting conclusions that cannot be adequately summarized here. The special problems of research libraries are discussed by Dowd. Information that can be used by librarians to educate their constituencies on the magnitude of the serials problem is insightfully prepared by Thompson.

Differential pricing by geography is treated in an article by Grinell. Non-U.S. libraries are paying more for U.S.-produced journals from Springer-Verlag, according to his findings. The effects of exchange rates on journal pricing are well explained by Strauch and Strauch. They present techniques the business world uses to protect itself from loss due to fluctuations in the currency market and suggest libraries do likewise. Moline conducted a study to compare the cost per thousand characters of scholarly journals in the humanities, social sciences, and sciences, as well as other variables to determine what effect various factors have on journal prices. Multiple regression analysis is used by Petersen to isolate the effects of individual factors on prices. Speaking as an economist, he offers a new and refreshing perspective on the topic. Ribbe offers a model to judge, in terms of cost, the relative quality of scientific serials in general. Some of the criteria he considers are citation data, sources of funding for research, circulation statistics, and subscription price.

Results of a number of price studies appeared during 1989. The annual update to the three-year price review compiled by the Faxon Company was published by Akie for 1986-88 and Young for 1987-89. Young and Ham-mell produced the 1989 price index of U.S. periodicals in *Library Journal*, and Clack examines the prices of U.S. serial services. These are all standard studies that have been appearing for many years and continue to provide valuable data. Anderson gives specific attention to veterinary journals in two annual studies, while Kronenfeld and Gable examine medical journal costs. Book and periodical prices are compared to other goods purchased by colleges and universities in Leach's article. All of these studies demonstrate that, again, the cost of library materials, particularly journals, continues to outpace the rate of general inflation in the United States.

Fifteen years of experience conducting or participating in pricing studies at Faxon is related by Alexander. Clack reports on a special session held during ALA where librarians, publishers, and academic administrators gathered together to discuss serials pricing. It was a unique and groundbreaking opportunity to hear various sides of the issue in one forum.

PUBLISH OR PERISH

The current process of scholarly communication was questioned in many arenas. Schuster's paper perceptively examines the context and predicts future trends in the academic labor market that could influence scholarly communication. Librarians were urged to develop a new science/technology/medicine communication system by Dougherty. Clack and

Riddick examine the pros and cons of the academic reward system as it relates to serials publishing. In a later article, they present responses from various quarters. Unfortunately, no one has a quick or easy solution to the pressure to produce more articles, publish more pages, and charge higher subscription rates. Hewitt succinctly asks, "Is the journal system as it presently exists economically viable?" The process of scholarly communication is not the problem, according to Cohen—it is the organization, delivery, and control of the literature generated by the process. Librarians need to learn more about how scholars conduct research before they will be able to meet the challenge of coping with the information explosion. After reviewing the literature on alternatives to the scientific journal and attempts to reduce its cost, Piternick discovers that few efforts resulted in any major changes or had lasting impact on the process. Popkin focuses on the unique position of the humanities. He sees little need for rapid communication in the humanities but a greater need for an active editor.

Other articles centered on the publishing aspect alone. Tagler explains how journals are organized around the subject matter they cover, which in turn is based on the way information is organized within a discipline. One publisher's experience in the journals publishing field is related by Graham. He believes librarians should be tough, yet show no animosity toward publishers because the two groups need each other. Two authors, Marshall and Bailey, describe the steps necessary to launch a new journal. The decision-making process, especially the business plan, is fascinating. All librarians should be cognizant of the economic factors publishers consider when starting up a new journal. A theoretical perspective on the economics of the scholarly journal is carefully prepared by Lewis. He concludes that journal publishing is a natural monopoly, but institutional subsidies could be an alternative to keep costs down. University presses, being more concerned with lining up authors, have spent little time conducting market research according to Henon. Judge examines poor management of Australian scholarly journals in the natural and social sciences. Inefficiency is causing them to lose money. Desktop publishing's role in papers published in four science journals is analyzed in a change-of-pace article by Stankus. He compares this new technology to conventional typescript and identifies recent improvements. The oftentimes elusive pattern of United Nations serial publishing is ambitiously covered by Komorowski.

SERIAL HOLDINGS AND ACCESS TO COLLECTIONS

Ownership of materials versus access came into question in several articles. The associated topic of complete and accurate holdings information is a key to any successful access system.

In a brief summary intended mainly for university administration, Tuttle identifies the issues involved in the ownership-versus-access debate. Cohen promotes the concept of a cooperative catalog of journal articles as an alternative to ownership. A pilot project to access journal articles through the University of California's MELVYL MEDLINE system raises many technical and policy issues, according to Lynch and Berger.

Providing serial holdings to the public in an automated system can

change the work flow in a serials unit. Van Avery discovers that maintaining accurate holdings statements online is more difficult but results in more information accessible to library users. Kim comments on a project to code retrospective holdings according to the USMARC Format for Holdings and Locations. The University of Georgia and the Faxon Company tested the transfer of serial holdings in the USMARC format between Micro-LINX, a microcomputer-based serials control system, and the university's mainframe system. Other methods to improve access based on user studies are considered by Harrington. She advocates more signs, an up-to-date serials list, and a separate serials information desk. Unsuccessful patron searches for known-item serial literature were analyzed to assist planning for serial holdings in the online catalog as described by Smith et al. Journal holdings information was greatly expanded when the SOL system became interactive, according to Seidman and Duffek.

SERIALS CATALOGING

Looseleaves and title changes were important themes in the works on serials cataloging.

Three different perspectives on cataloging looseleaf publications are expressed by Bluh; Cole; and Tallman, Scott and Russell. Bluh's article discusses maintenance of looseleaf collections as well as cataloging treatment. She believes automated serials control systems will help libraries better manage their looseleaf services. Cole thoroughly identifies the problems associated with looseleaves and the rationale for cataloging them as either serials or monographs. He proposes cataloging looseleaves as monographs (according to Hallman's 1986 guidelines) in the MARC Serials Format as a compromise. The University of Arizona reexamined its policies for treatment of looseleaves in light of the 1986 Library of Congress rule interpretations and made a number of changes.

Northwestern University has been experimentally using latest-entry cataloging for title changes since 1985. As described by Case et al., it has developed cataloging rules to supplement AACR2 chapters 12 and 21. Bernhardt, on the other hand, believes the online catalog should be responsible for proper linking messages, not the MARC structure. She proposes a way to program the catalog to retrieve and display related serial records cataloged under successive entry together.

Retrospective conversion was the subject of two articles. Close cooperation between the catalog and serials departments was essential to the success of a project described by Stachacz. Broadway and Qualls offer good advice for increasing productivity and efficiency as well as enhancing staff morale.

Miscellaneous topics covered in other articles include a response by Shelton to a 1988 article proposing changes in serials cataloging. Chapman describes the current practice for using the uniform title "Laws, etc." in contrast with the form subheading "Laws, statutes, etc." The challenge of cataloging serial computer files is met by Wang. The treatment of monographic series in the online catalog is explored by Steinhagen.

To round out the discussion of serials cataloging come two very good articles summarizing important developments. Jones highlights current

developments as of June 1988. Williams reviews important developments during 1987, with great emphasis on standardization for machine-readable records. This excellent, although now dated, article contains many citations worth investigation.

AUTOMATED SERIALS SYSTEMS

Many different serials control systems were described in the literature of 1989. INNOVACQ serials implementation was accomplished at the University of Miami's Law Library with very little preliminary planning, according to Lowell. Another law library chose to implement OCLC's SC350 system, as related by Janto. The expansion of REMO (ReadMore's microcomputer serials system) from a single workstation system to a multiuser network is described by Geyer and Botta. Pease discusses an in-house serials system, LERS, designed for a specialized research library at Ohio State. Two approaches to implementing the NOTIS serials component complement each other nicely in an article by Martin and Rieke. One area transferred from OCLC's online Serials Control Subsystem to NOTIS; the other converted from a manual operation.

Three perspectives on the OCLC Serials Control Subsystem are recounted by Rast, Scott, and Martin. Union listing, cataloging, check-in, and migration to a new check-in system are all covered by the authors on the occasion of the subsystem's termination.

In articles of a more general nature, Rush points out four main classes of hardware to consider for automated serials systems, and Miller-McIrvine recommends linkages between bibliographic tools for control of serials and the development of article-level control systems.

SUBSCRIPTION AGENTS

Subscription agent services were closely scrutinized by both librarians and agents. Ivins, as an informed consumer, advocates monitoring vendor practices to ensure agents earn their service charges. Merriman lists the factors an agent needs to consider to determine its pricing policy. He also delineates various services agents offer of benefit to publishers. Basch offers a few ideas on how to determine value for service, paraphrasing an advertising slogan, "An educated librarian is our best customer," to illustrate his point. In another article he considers ways librarians should use to select one "department store" vendor over another, since essentially they all offer the same services. Maddox highlights the differences between the smaller, more specialized agent and the large, full-service ones. Ivins concludes the discussion with six reasons for librarians to use multiple vendors.

A successful project to consolidate orders with one agent is described by Anderson. Although the library had been happy with the services of three vendors, an administrative directive forced them to select only one, with quite satisfying results. The legal obligations of an agency to act in the interest of its beneficiaries (i.e., libraries) are explored by Clasquin. Contrary to expectations by various librarians, he suggests that periodical agencies do not carry much weight with publishers in terms of influencing business practices or pricing policies. Merriman's belief that agents offer

many advantages to publishers seems to counter Clasquin's argument, and most librarians expect their subscription agent to act as their advocate with the publisher. Boss and McQueen have published a survey of the use of automation and related technologies by forty-eight domestic book and periodical vendors.

COPYRIGHT

Various facets of the copyright issue are presented. Scanlan introduces the topic and extracts important ideas from the other papers. Fair use in an academic context is explored by Marshall. He proposes expansion of the Copyright Clearance Center to license faculty members copying for classroom use or issue site licenses similar to those issued by some music organizations to allow musical performances on campus. Ten years of activity at the Copyright Clearance Center are assessed by Riordan. Penick provides a publisher's perspective on the copyright issue. Weil tries to clarify some of the confusing points of the copyright statute. He acknowledges that new technologies will have a profound effect on the law in the years to come. Cooperation between publishers and librarians is crucial to the success of the system.

COLLECTION DEVELOPMENT, ANALYSIS, AND MANAGEMENT

Many authors investigated the journal literature of a particular discipline. The most frequently requested journal titles by humanities scholars are identified by Broadus. A hierarchical ranking of a journal's value for promotion and tenure for health science librarians is compiled by Fang using SCISEARCH and MEDLINE. Physics journals are analyzed by Clark and Kinyon to determine which were indexed and what percentage of articles were covered in various online databases. Management professors are surveyed by Brink and Shilliff to determine a journal's appropriateness as a forum for scholarly research. Subject coverage in a core group of mathematic journals is analyzed by Sapp. Hardesty and Oltmanns determine that a small number of heavily cited psychology journals satisfied most needs of undergraduate psychology students.

Patrons' usage of serials collections was also investigated. Franklin reports on a project to study the use of previously suspected low-use titles to determine a cost-per-use figure to assist the library in making cancellation decisions. Devin examines the question of use as it relates to serial expenditures. When do we finally reach the point when we say enough is enough? Ways to improve service result from a use study of periodicals and newspapers in a public library by Lenahan. Millson-Martula's survey of the literature yields little on how periodical evaluation data were used in the decision-making process. A cost-benefit factor for journals at the Indian Space Research Organization was determined, and decisions for cancellation were based on this figure as well as other factors, as recounted by Sridhar. An ambitious three-year review and cancellation project was undertaken at Arizona. Tallman and Leach list the criteria used for deselection and the project timetable for each of the three years.

Bustion and Gyeszly relate how a dBase III + program grew from a deselection tool into a serials management tool, used for use studies, generation of bindery pick-up slips, and studying security in the current periodicals room.

The conditions under which a successful regional cooperative collection development program for serials can exist are set forth by Sartori. She also describes various cooperative collection development plans.

Serials Review and the *Serials Librarian* frequently contain listings of journals on a particular topic. Some of these bibliographical articles are annotated. I have listed only a sampling of the articles appearing in 1989 for space considerations. Consult these two journals for complete information.

The topic of AIDS is covered in an annotated bibliography by Lister. A comprehensive list of current Saudi Arabian medical journals is compiled by Mansfield. Studwell has reviewed opera and church music serials. Library and information science journals published in the People's Republic of China are not readily available in North America, explain Tao, Cole, and Zuang. They provide subscription information as well as some critical analyses about these publications.

Fourteen of the five to six hundred new periodicals are highlighted by Katz. Libraries with an interest in government serials will want to read Morehead's review of Schwartzkopf's *Government Reference Serials*. McKay compares the differences between the "old" and "new" *Christian Science Monitor* and concludes the new version is still of value to library users. The three formats of the *Serials Directory* are reviewed by Walters. Unfortunately, she neglects to cite the two previous reviews of the print version by Tuttle and Davis.

CD-ROM AND ELECTRONIC DEVELOPMENTS

A basic review of the issues, questions, and problems libraries face as they implement CD-ROM technology is furnished by Silverman. Her comments are based on the experiences of various PALINET libraries. Michalak has observed changes in the way libraries access information via CD-ROM products and their impact on library services, users, and staff. A study at the Columbia University Libraries, underwritten by the Pew Trust, on the impact of CD-ROM products and technology on library services and the research process is slated to evaluate over thirty different products. Juhl and Lowry report on the first year's results.

Information on Demand's experience with the ADONIS project is related by Orchard. At the time her article was written, it was still too early to draw any conclusions about the success of the project. She expresses concern that the U.S. library community is unaware of the ADONIS CD-ROM collection. Perhaps a mention here will encourage more librarians to investigate the project's potential.

Full-text databases were investigated by Tenopir and Shu to identify the search strategies used by patrons to retrieve magazine articles. Since patrons use a variety of strategies, a full range of search and display features should be offered by the database producers.

MISCELLANEA

Root conducted a random sample survey of libraries to determine what percentage of the budget is allocated to commercial binding or what in-house binding processes are used. She describes five different types of in-house binding currently in use but discovered libraries most frequently use commercial binding. The Help-Net System from the Heckman Bindery in place at the University of Cincinnati is described by Heidtmann.

A spreadsheet program helped plan the shift of a journals collection, as recounted by Tucker in general enough terms to easily adapt to one own's library. A fiscal control system using dBase III+ and Lotus 1-2-3 is described by Shuster as a good program for small or medium-sized libraries. Van Liew et al. prepared cumulative author and subject indexes to a medical journal using MEDLINE tapes, dBase III+, and Turbo Pascal. Obviously libraries are discovering lots of worthwhile applications for nonlibrary software!

The labyrinth of serial article identifiers is expertly navigated by Paul. She explains the two different methods of identifying serial articles—SAID (developed by SISAC and NISO) and BIBLID (developed by ISO).

Information is considered a main currency in a service-based economy, states McGinn. He believes serials play a role in the economic development of North Carolina through the North Carolina Information Network. The efforts of a consortium to build and maintain a union list of serials are chronicled by Stachacz, Miller, and Rotz. It is interesting to read how they handled the assignment of various responsibilities and the maintenance question.

Various serial services, such as subscriptions, specialized bibliographies, and translations at the Chinese Academy of Agricultural Sciences, are described by Pan. Gorman focuses on the education of serials librarians in Australia and proposes a basic serials course for Australian library schools. He also reviews various surveys on serials education in the United States and United Kingdom and presents a good, select bibliography.

Public service and management considerations of a current periodicals room are the focus of an article by Pontius. Faculty involvement in the decision-making process for journal cancellations is depicted by Sapp and Watson. Strauch, Fugle, and Markwith discuss and react to some basic assumptions about serials. Why do we pay for journals in advance? Why do discounts and service charges differ so between books and serials? All the players in the serials information chain need to keep asking why to better understand and respect the others' position.

The world of serials is ever changing, ever expanding. A good serialist needs to stay current on many different developments—no easy task. Review articles such as this one serve to help identify pertinent articles on a particular topic or just to refresh one's memory. It is a difficult challenge to be a good player in the serials information chain, a challenge that inspires most serialists to achieve remarkable results, as represented by this year's literature.

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The Year's Work in Acquisitions and Collection Development, 1988

William Schenck

Joseph Barker, speculating on what acquisitions and collection development will be like in the year 2001, predicts these functions will be linked by computers to all appropriate library and commercial sources. While we have a long way to go to reach the technological paradise Barker describes, the future is now for much of this, as the articles for 1988 demonstrate. Automation is being used extensively in all areas of collection development as well as in the more traditional acquisitions areas.

In addition to articles describing the applications of technology, more traditional concerns, especially approval plans, acquiring out-of-print books, and collection evaluation were widely discussed in the literature. The paramount concern among collection development and acquisitions librarians (as well as library administrators) in 1988 was the continued increase in costs of serials and the resulting impact on library budgets; the many articles related to this issue are covered in Davis' "Year's Work in Serials, 1988."

PUBLISHING

Reporting on the sixteenth midyear meeting of the American Society of Information Science, Motley estimates that 1.3 trillion new pages of information are generated every year; 95 percent of our collected memory is stored on paper, 4 percent on microfilm, and just 1 percent electronically. Obviously the printed word is still of prime importance.

Consolidation and mergers continued to dominate publishing. John Baker, editor-in-chief of *Publishers Weekly*, calls 1988 a year of "restless turbulence—a year that often seemed to be more about money than books." Grannis reports publishing output in 1988 was similar to that of 1987, but with an increase in the number of business and travel books published. Although the year will be remembered as one without a Stephen King book on the bestseller list, books of veteran novelists and celebrity authors proved most popular. Seventy-six nonfiction books sold over 100,000 copies—a new record (Maryles).

McDowell discusses the increasing consolidation in publishing. He compares publishing patterns to land ownership in the third world, with 2 percent of U.S. publishers responsible for 75 percent of all titles published

and the top 30 percent responsible for 99 percent of all books published. Barbato, however, reports a counter-trend, one with serious implications for libraries: the proliferation of small publishers. In 1987, according to Barbato, nearly 5,000 new publishers applied for ISBN publisher designations.

Several librarians expressed concern on the state of publishing. Herbert White warns scholarly publishers that the "warm and cordial" relationship with libraries is in danger due to growing financial pressures on both parties. Leonhardt (A) calls for librarians to become better informed about the publishing industry, especially in areas of special concern such as remainders and press-runs. He urges librarians to produce their own studies of the publishing industry. Abel and Secor express concern about the relationship between publishers and vendors. Abel (A) argues that we are disseminating information in the late twentieth century based on an eighteenth-century system.

Publishing activities in thirteen countries and geographic regions were described in *The Times Literary Supplement*.

OUT-OF-PRINT

The apparent increase in the number of titles being declared out-of-print was a major area of concern with librarians. Marsh (A) gives an overview of a meeting held at the ALA Annual Conference in New Orleans on out-of-print titles. The Denver Out-of-Print Seminar is described by Marsh (B); Mae Clark provides similar coverage of the first Florida Out-of-Print Antiquarian Book Market Seminar. Both writers encourage librarians to attend these annual seminars to learn more about the out-of-print book trade. In an article in *The Horn Book*, Epstein says that while backlists of children's books from major publishers are shrinking, repackaging and improved marketing have combined to keep many children's books in print. Epstein attributes part of the success in keeping children's books in print to close cooperation among librarians, booksellers, and publishers.

Selth argues that librarians must do more research before assuming that publishers are declaring more titles out-of-print. Using an admittedly small sample of books published five and ten years ago, he determines that books are going out-of-print less rapidly than often assumed. Comparing British and American publishers, he discovers that the numbers of books remaining in print in the two nations are similar for the first five years after publication; in the second five-year period more British books are declared out-of-print. Howes provides an overview of the market for antiquarian and used books in Australia.

ACQUISITIONS

Two helpful general bibliographies were published in 1988. Deffenbaugh and Yelish prepared an annotated bibliography of thirty-nine major articles, books, and journals related to acquisitions. The bibliography was compiled under the auspices of the Acquisitions Committee of the Resources Section. Lenore Clark's bibliography covers articles on approval plans, the impact and management of rising materials costs, discriminatory pricing, and the acquisition of materials in new formats.

There was increased interest by acquisitions librarians in the role and evaluation of vendors. Lynden (B) writes of the importance of collecting data on prices and discounts. Secor believes the trend toward consolidation of dealers is irreversible as vendors find themselves sandwiched between publishers cutting discounts and librarians wanting additional services. Romanansky predicts that vendors will use increasingly sophisticated marketing techniques to create markets for books. Two articles cover vendor pricing. Marsh (C) discusses the effect that net pricing has on vendors; Richard Abel (A) defends the concept of cost-plus pricing that he first introduced. Leonhardt (B) advocates the purchase of library materials through vendors, encouraging librarians to take advantage of the services they offer.

It became easier to evaluate vendor services with the publication of the *Guide to Performance Evaluation of Library Materials Vendors* (American Library Assn.). This guide, the result of extensive discussions within the Resources Section, provides a methodology to evaluate the quality of monographic vendors, encouraging librarians to do such evaluations on a regular basis to ensure the best discounts and service. An annotated bibliography of articles on vendor performance studies is included. Another, more extensive annotated bibliography on vendor performance studies was compiled by the Vendor Study Group of the Association for Higher Education of North Texas. SALALM published the third edition of its vendor list, providing librarians with an invaluable source of information on Latin American book dealers.

The British Net Book Agreement continued to generate debate. Sutherland supports the agreement, arguing that the NBA, which strictly controls discounting of books in Great Britain, actually promotes diversity in publishing. The NBA, he claims, is valid because books are different; they are not just another commodity.

Telemarketing continues to frustrate librarians. Gale's tongue-in-cheek description of a telephone conversation between a harried reference librarian and a salesperson describes the frustration we often feel.

APPROVAL PLANS

Approval plans were a major area of renewed interest in 1988. Howard updates a 1982 SPEC Kit on approval plans, finding that they are used in 90 percent of ARL libraries. While financial constraints have caused some libraries to reevaluate their approval plans, others are using financial pressures as an argument to expand their plans. Leonhardt (C) argues that approval plans are beneficial and cost-effective for smaller libraries.

Loup studies approval plan receipts in twenty-eight ARL libraries and concludes that approval plans are being used to build core collections. Miranda, in his study of business libraries, finds widespread use of approval plans to acquire business titles. Schmidt describes the advantages of approval plans that supply the books of specific publishers.

Several writers focused on studies relating to approval plans at their institutions. Laughrey describes the use of approval plan vendor reports at the University of Michigan; Pasterczyk (B) questions the value of vendor-generated analysis of returns based on a study at the University of New

Mexico. Womack describes a process used at the University of Nebraska-Lincoln for evaluating new or existing approval plans.

Alessi and Wittenberg discuss budgeting for approval plans. Wittenberg recommends treating approval plans as serials, with an annual commitment of funds. Alessi, using figures from Blackwell North America's approval plan, describes a dramatic increase in the number of university press titles, stating that "a library wishing to collect university press titles in 1986 at the 1979 level needs 87.5% additional dollars."

Ferguson (B) studies the best method to acquire British books distributed in the United States, concluding that it is cheaper and faster to obtain these books from England.

AUTOMATED ACQUISITIONS

The articles on automation emphasized practical considerations. Hawks reports on a preconference on automated acquisitions held prior to the New Orleans Conference. Marcinko discusses advantages of a single, integrated system, while Burke tells how such integrated systems permit better and faster communications with vendors. Schroeder discusses staffing implications when implementing an automated system in acquisitions, while Rook emphasizes the human aspects of planning for automation. The ways in which a library can influence development of an automated system are detailed by Anderson; Hyslop describes what happens when, in an automated system, acquisitions records become available librarywide. Automation of exchange records at Brown University is described in Wise's summary of the Gifts and Exchange Discussion Group.

GIFTS AND EXCHANGES

This traditional area of acquisitions received little attention during the year. Exchange operations at the National Agricultural Library and at Brown are described in Wise's report. DeWitt gives suggestions on how to say no to a donor; Nelson tells how a written gift policy helped the Brigham Young University Law Library organize its gift functions. Lynden (A) encourages solicitation of what he calls GOTM—gifts other than money.

BUDGET

Mann, writing of inadequate library budgets in Great Britain, comments that "Thomas Carlyle's remark that 'the true university . . . is a collection of books' should perhaps now be amended to be 'a collection of periodicals.'" As prices of all materials escalated, librarians continued to look for improved methods of budgeting. Werking provides a brief but informative survey of methods of allocation and concludes that "our responsibility is to apportion the materials budget in ways that will most benefit our libraries." Welsh argues for examining external factors such as the size of the published literature when evaluating budget needs. Lynden (B) emphasizes the importance of local price studies; Laughrey describes such studies done at the University of Michigan. Packer describes budget allocation at Western Washington University in which the budget is divided into a general allotment to cover reference indexes and general serials; a formula-driven allotment is then given to the academic departments. Lyn-

den (A) lists five ways to successfully "sell" the materials budget to college administrators. He also recommends formation of a collection budget group composed of library staff involved in purchasing. He describes (C) the budget problems faced by European libraries and he examines the need to monitor the costs of European publications, concluding that European vendors who supply books to American libraries are the best sources for data on prices.

SELECTION

Several articles covered theoretical aspects of book selection. Losee argues that selection should be done by a scientific method. Brownson looks at selection in three subject areas and, based on his experience, calls for more quantification in the selection process.

Null examines dual assignments from the perspective of a reference librarian with selection responsibilities, concluding that "some compromise must be struck if we are to give part-time selectors the time and support they need to develop and manage good, coherent, well-planned collections." Pasterczyk (A) discusses training methods for new selectors.

Vidor enters the debate on faculty versus librarian selection and, after an examination of the collection of the School of Business Administration at Emory University, states that the "hypothesis that librarians are more effective collection developers than faculty has not been proved." Miranda surveyed thirty-nine business school libraries and finds that the influence the faculty exerts decreases as the size of the institution increases. Di Giambattista calls for close cooperation between librarians and faculty to build specialized collections.

Selection tools were examined by several writers. Judith Palmer's analysis of fiction reviewed between 1964 and 1984 in *Library Journal* and *Booklist* finds that the former has done a better job of reviewing new fiction but that both journals improved in quality and coverage. Gorman (B) suggests that national bibliographies from developing countries, while often the only source of information, are published too late to be of value in selection.

Selection of foreign titles was addressed by Schreiner and Joseph Palmer. The former looks at selection methods used to acquire European books at two medium-sized university libraries and warns that the "lack of foreign approval plans and dependence on faculty selection reveals a marked lack of systematic control over foreign literature collections." Palmer discusses holdings of Canadian books in American libraries, finding that titles not reviewed in U.S. journals are not likely to be held.

The debate of quality versus demand-driven selection for public libraries was addressed in a study by Hamilton, who finds a commitment among public librarians in Illinois to both methods. Onieal discusses ways in which public libraries can meet demand for popular titles.

Van Orden's book is an excellent and comprehensive survey of selection methodology for various types of visual materials for school library media centers. Ternberg and Miranda both cover selection for business collections. Other specialized categories of materials are discussed by Lopez, who advocates purchasing more dissertations; by Pask, who argues that working papers should be collected but kept informally for only three

years; and by Emery, who describes the importance of collecting materials on women's studies. Robert Gorman's study of four Georgia libraries demonstrates that librarians are purchasing books that present the conservative viewpoint.

EVALUATION

Grover's article describes why evaluation is a necessary component of collection development. Sandler lists seven steps to follow for a successful analysis. Lancaster's library-science text lists various methods to use in an evaluation.

Several articles described how automation can be used in evaluation processes. Dillon and his OCLC colleagues write of the development of an automated collection analysis system, and Armbruster describes the AMIGOS collection analysis system. A study reported by Sanders shows that it is possible to use both OCLC and RLG databases to analyze collections and to compare holdings, but local cataloging differences and priorities do affect the reliability of the results. Piccininni's article shows how the State University of New York system uses the HEGIS (Higher Education General Information System) reports to compare collection strengths with instructional programs. Beaton, in an article on interlibrary loan, describes how an automated record of titles requested can help to identify collections' strengths and weaknesses. Cubberly describes the evaluation of the nursing collection at the University of Central Florida.

CONSPECTUS

Several articles described the Conspectus developed by the Research Libraries Group, its use in research libraries, and its adaptation to smaller institutions. The article by Ferguson, Grant, and Rutstein gives a ten-year review of the Conspectus, saying that it "has gradually evolved into a major tool of communication and cooperation between and within libraries." The manual prepared by Reed-Scott is designed to assist librarians using the Conspectus; Swindler describes an online database for the Conspectus developed at the University of North Carolina-Chapel Hill.

Forcier tells how the Conspectus has been adapted for use among libraries of various sizes and types in the Pacific Northwest and how the Conspectus collecting codes were modified to meet the needs of smaller libraries. Oberg details the use of the Conspectus in a college library, concluding that the basic success of the project is in increasing the skills of the librarians who participate and thus improving knowledge of their collections. Nisonger describes a similar result. West uses the Conspectus to evaluate the Russian and Slavic collection at the University of Alaska-Fairbanks.

Howard White describes a pilot project that uses the OCLC holdings data to verify Conspectus collection levels in lieu of the more extensive verification studies undertaken by RLG.

RESOURCE SHARING

Technological advances, coupled with budgetary constraints, encouraged resource sharing. The model developed by Dougherty is based on

provision of timely access to publications held by other institutions. Jaramillo argues that technological advances have made resource sharing possible. Michalak, Parker, and Burroughs all discuss the need for improved regional cooperation, using the Pacific Northwest as an example. Michalak calls for close cooperation between collection development and interlibrary loan librarians.

There was a surprising lack of articles detailing specific resource-sharing arrangements. An exception is Cubberly's description of cooperation between the University of Central Florida and nearby hospitals. Burlingame's article gives a history of the Library of Congress' program to make books from south Asia more widely available in the United States. Yu, in an article on Chinese libraries, says that resource sharing in China is limited by the need for more trained librarians and better management techniques.

Several articles concentrate on the Center for Research Libraries (CRL). Boisse calls CRL "one of the most successful examples of shared collection development and shared use of resources in the Library world." Boucher and Dowd concentrate on CRL's collections, while Loring and Mateer describe access and publicity. The article by Rutledge proves a methodology for libraries to use to evaluate the cost-effectiveness of CRL membership.

USE STUDIES

The use of library materials received significant attention. Metz measures collection use at Virginia Tech, finding a high correlation between in-library use of bound materials and circulation but finding that use of current periodicals to be qualitatively different. Lancaster's text has a chapter on in-house use of materials, citing surveys to show that there "is no real reason to suppose that the items used within a library will be much different from those borrowed."

Hardesty studies collection use at Eckerd College, a small, liberal arts institution, replicating one he did earlier at DePauw University. The two studies mirror the conclusion of the Pittsburgh study that recorded circulation is the best indicator of total use; a small number of books receive considerable use and many books no use. Hardesty speculates that the reason faculty select books that do not circulate is that the faculty select based on their graduate experiences at much larger libraries.

Both Lancaster and Hardesty argue that past use is the best criterion to use in weeding or removing books for storage. Roy is unable to find any studies that demonstrate a relationship that weeding has on circulation and he calls for further research on this topic.

POLICIES

There was little on the need for written collection development policies. Bostic concludes that written policies are "fundamentally important in support of a university's academic programs." Gorman's book on collection development in Australia echoes Bostic's view; Yu argues that such statements would be very useful for Chinese libraries.

NEW TECHNOLOGIES

Debate continued concerning how to acquire and pay for information in new formats, especially CD-ROMs. Buckland argues that all formats are part of the world of communication and scholarship and are thus an integral part of the library materials fund. Nissley encourages librarians to purchase and use the new technologies in order to influence vendors and manufacturers. Cargill describes the impact that CD-ROMs are having on library budgets.

The challenge, according to Ferguson (A), is "for collection managers to become sufficiently knowledgeable about the new medium so that they can distinguish between CD-ROM titles which will truly benefit the library's patrons and those which are just examples of a new electronic fad." He lists eight criteria used at Columbia University to determine which CD-ROMs should be acquired.

RESEARCH

The research done for the preparation of this article shows that acquisitions and collection development remain major areas of interest in the literature. Atkins writes that collection development has always attracted considerable attention but that research and publication is cyclical. Kohl calls for more research and for more studies to replicate and confirm research findings.

Kohl finds that most of the published research in collection development that appeared in thirty-three library publications from 1960 to 1983 came from academic libraries. The issue, he says, "is not to do less research in academic libraries, but to do more research across the board in public, school, and special libraries." Many excellent studies appeared in 1988, but almost all focused on academic libraries. This author echoes Kohl's call for broader-based studies.

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The Year's Work in Descriptive Cataloging, 1989

Carlen Ruschoff

The great volume of publications in our field in 1989 attests to a productive year for scholarship on descriptive cataloging. The author has had to be selective in the articles and books she reviewed. For simplicity, the array of publications has been divided under eight headings: Theory, *AACR2 Revised* and Cataloging Manuals, Nonbook Cataloging, Authority Control, Shared Cataloging, Retrospective Conversion, Management, Expert Systems and Education and Recruiting.

THEORY

The most useful single addition to the theoretical literature on descriptive cataloging published in 1989 was *The Conceptual Foundations of Descriptive Cataloging*, edited by Elaine Svenonius. This volume is the report of a conference held in 1987 at the University of California, Los Angeles, "to stimulate visionary thinking about the future direction of descriptive cataloging." The conference succeeded in its purpose, as the essays that resulted from it are thought provoking and entice the reader into thinking through once more the essential objectives of our discipline.

In the first paper, Wilson summarizes where we are in respect to bibliographic access and suggests rethinking descriptive cataloging in light of recent technological changes. He argues:

As the technology of information marches on, increasingly the information held in any form by one library will be available to others in some form . . . If we are to think usefully about descriptive cataloging, we must think of a future in which actual legible copies may constitute only a tiny fraction of the collection available at a particular place, and in which virtual copies are treated on a par with actual copies. (Wilson, p.7)

Taking this trend into account, Wilson recommends reversing the order of Lubetzky's well-known objectives of the catalog. Lubetzky made it his first objective "to enable the user . . . to determine readily whether or not the library has the book he wants" and his second "to reveal what works the library has by a given author . . . [as well as the] editions and translations of a given work." Wilson holds that the arrival of microfilm and electronic media switches the priority of those two objectives. This means that

"virtual copies" (works that contain the same content but may be in some different publication or presentation form) should be treated as actual copies and that catalogers must realize that the works they deal with "may often be a rapidly changing sequence of momentary textual states . . ." Wilson, p.15).

In another essay, O'Neill and Vizin-Goez follow upon Wilson's argument, but they contend that online catalogs can be designed to meet both the first and the second of Lubetzky's objectives of the catalog without compromise. Like Wilson, they believe that manifestations of works that are essentially the same or that have only slight variations should be treated as copies rather than editions, but they go further and provide usable definitions of terms such as *work*, *text*, *edition*, and *book*, and they propose workable guidelines for identifying a work (O'Neill and Vizin-Goez).

Several authors hold that the internal structure of the catalog and the information that the catalog user sees can be altered to enhance access to cataloged materials. Duke looks at ways in which computer technology can be exploited to provide full access to works and proposes a tripartite record structure consisting of a document surrogate, similar to the bibliographic description, a document guide, which is an abstract of the content, and the document text, or the document itself (Duke). Attig points out obstacles to access that are built into the current bibliographic structure. He discusses problems representing bibliographic relationships within the constraints of the MARC record and the difficulties raised by multiple versions of bibliographic works (Attig). Tillett shows how bibliographic records have evolved from Panizzi and Cutter in the last century to the computerized catalog in the last two decades. She argues for clarity and consistency in the structures used to link bibliographic records, and she concludes by calling for more care in distinguishing between the concept of an authority record and a bibliographic record (Tillett, B).

Gorman, in an essay published elsewhere, offers an analysis in many ways similar to Tillett's. In "Yesterday's Heresy—Today's Orthodoxy: An Essay on the Changing Face of Descriptive Cataloging" (Gorman, C), he chronicles the downfall of four historic cataloging orthodoxies: corporate authorship, uniform personal headings, the main entry, and the card catalog itself. The MARC format and the introduction of online catalogs have made each of these obsolete and allowed descriptive catalogers to produce both a more complete and accessible bibliographic record containing more consistent citations and results in more uniform, searchable catalogs.

The issue of authorship is taken up in an essay by Wajenberg, examining past definitions of authorship and the bibliographic problems that strain these definitions. He cites the cases of computer programs and retranslations of classic texts and suggests that for such works of diffuse authorship the principal author may be difficult to discern or, in fact, may not be important. Accordingly, he proposes a new definition of authorship: "An author of a work is a person identified as an author in items containing the work, and/or in secondary literature that mentions the work" (Wajenberg, p.24). This concept of authorship by attribution forces a cataloger to decide what is an appropriate secondary source, but it also spares the cata-

loger difficult choices regarding who wrote a work or if the author ever existed at all.

A still simpler option is to include all authors as access points and to abandon main entry altogether. This approach is explored and championed by Takawashi, who describes the no-main-entry principle in the Nippon Cataloging rules used in Japan. Editor Svenonius directs our attention to the Japanese model as a way to observe how the main-entry-free catalog works (Svenonius, p.62), but other essays in this volume argue for the continued use of main entry. Carpenter, for example, cites numerous ways a main entry is used to collocate works of a single author or type, and to differentiate distinct works of similar title or authorship (Carpenter).

AACR2 REVISED AND CATALOGING MANUALS

Publishing AACR2 and its derivative volumes continues to be a major industry. A new edition of *The Concise AACR2, 1988 Revision* (Gorman, B) incorporates all the revisions of "the mother code." Weihs and Howarth produced *A Brief Guide to AACR2 1988 Revision and Implications for Automated Systems*. The volume is divided into two parts. Part 1, written by Weihs, contains a list of the revised rules and an explanation of the reasons for the rule changes (although it should be noted that this listing does not include rule revisions published in 1982, 1983, 1985, or the revisions of chapter 9, nor are the actual rules discussed reprinted). Part 2, written by Howarth, discusses the relationship between cataloging codes and automated systems. Considerable detail on the effects of rule revisions on the length of bibliographic records is provided, along with discussion of the implementation strategies and the expenditures that the rule revisions will require (Weihs and Howarth).

The most comprehensive listing of revisions made to AACR2 is found in *Changes to the Anglo-American Cataloguing Rules, Second Edition* (Swanson). Organized by chapter and rule number, the guide cites every change, including revisions of all instances of revised wording and added examples. A summary of the revisions that resulted in a change in cataloging practice is provided at the beginning of each chapter.

Several books were published to assist catalogers in their daily work, many of them updated editions of standard cataloging tools. For example, *The Library of Congress Rule Interpretations* has been thoroughly revised in concert with AACR2R. Interpretations that were incorporated into the revised edition of the cataloging code have been removed, reducing the size from two large volumes to one. Two updates were issued in 1989 that include the LC policy decisions on its cataloging simplification program. Also of interest on LC interpretation is Studwell's commentary on the LC decision on the illustration statement in his article published in the *RTSD Newsletter* (Studwell).

A guide to applying AACR2, Maxwell's new edition of *Handbook for AACR2: Explaining and Illustrating the Anglo-American Cataloging Rules*, which includes the 1988 revisions of AACR2, retains its virtues of clarity and accuracy (Maxwell). Hunter has updated his earlier work on AACR2, producing *An Introduction to AACR2: A Programmed Guide to the Second Edition of the Anglo-American Cataloguing Rules 1988 Revi-*

sion (Hunter). *Notes on the Catalog Record: Based on AACR2 and LC Rule Interpretations* (Saye and Vellucci), is a new and comprehensive work on the formulating of cataloging notes in a bibliographic record. A great obstacle to its use, however, is that the LC policy on certain notes, such as the index and bibliography notes, has been changing regularly. A new edition will be needed very soon—under the circumstances, perhaps a looseleaf format would be advisable!

Miller and Terwilligar's *Commonsense Cataloging: A Cataloger's Manual* appeared in its fourth edition in 1989. It remains a good introduction to the discipline of cataloging, covering every topic from the history of cataloging to cataloging codes and cataloging copy (Miller and Terwilligar).

Aside from guides to AACR2 and LC rule interpretations, there were a number of articles identifying and discussing specific cataloging problems. One article identifying cataloging problems was "Editions and Printings: Applying AACR2 to Monographs" (Gaeddert). The article outlines the thought process in determining whether the item is a copy of an edition of a work or a new edition in its own right. The definitions and descriptions of the types of dates are precise and sophisticated, making this a useful aid to the cataloging instructor but not for the novice. Chapman summarizes the changes in the practice of establishing collective uniform titles for collections of laws since the implementation of AACR2 (Chapman). The problems of cataloging conference publications and materials in looseleaf format were topics discussed by Borries and Cole respectively. Although these articles focused on two different types of materials, the cataloging problems cited are similar, namely: Are these publications monographs or serials?

NONBOOK CATALOGING

A number of works were published last year on the cataloging of special materials. The broad field of nonbook cataloging is treated in *Media Access and Organization* (Frost). This volume discusses bibliographic control, organization, and descriptive cataloging for cartographic materials, sound recordings, video recordings, microcomputer software, three-dimensional realia, and microforms. The cataloging of musical works is well treated in *Music Cataloging: The Bibliographic Control of Printed and Recorded Music in Libraries* (Smiraglia, A). While indispensable to students of music librarianship, it also serves as a handy guide for practicing catalogers who find themselves cataloging this material only occasionally. Librarians undertaking the task of planning a microform cataloging project will find "Problems in the Cataloging of Large Microform Sets or, Learning to Expect the Unexpected" (Joachim) a useful tool in predicting the difficulties in processing materials in microform.

Cataloging one-of-a-kind materials offers a unique challenge. This genre includes both archival materials and art objects. In "The Quest for a Code, or a Brief History of the Computerized Cataloging of Art Objects," Stam discusses the development of networks, remote searching, and other means of knowing what is where (Stam). The keepers of such materials are increasingly looking toward electronic bibliographic networks as models.

Havens describes a project to catalog a private art collection using AACR2 and the MARC format (Havens). Bearman explains the pros and cons of the AMC and what it means to archival materials, while Gertz and Stout emphasize the development of the AMC format. Both articles stress the importance of incorporating archive records into bibliographic databases.

AUTHORITY CONTROL

The editors of *Cataloging & Classification Quarterly* devoted an entire issue to the topic of authority control. Tillett's introduction to the volume offers an excellent overview of the state of the art. Included here are definitions and distinctions between authority control and authority work and a "Suggested Taxonomy for Name Relationships" is included in the appendix (Tillett, A). Taylor reviews the research literature pertaining to authority control, concentrating on the last decade and identifying gaps in the literature (Taylor, B). Fuller determines the extent to which persons' names appear in different forms in their works and examines the types of differences among the forms. She finds that more than 80 percent of the names she searched appeared in only one form (Fuller). Smiraglia reports on a study investigating problems in the collocation of musical works such as the high occurrence of multiple manifestations of musical works and the differences in title presentation from edition to edition. The research reaffirms the need for uniform titles to collocate or differentiate works, as well as the need for more references. It concludes that links among authority records for works could provide what he calls "increasing syndetic depth" (Smiraglia, B). Delsey summarizes the development of the internationally accepted standards in authorities and authority control. He concludes his article with a discussion of possible models for international authority control systems (Delsey).

The subject of authority control in music library catalogs is treated further in *Authority Control in Music Libraries: Proceedings of the Music Library Association Preconference, March 5, 1985*, edited by Ruth Tucker. Tillett provides a clear and concise explanation of authority control and its function in fulfilling the objectives of the catalog, particularly collocation of like materials. Definitions of terms relevant to authority control are clear and useful. Implications of technology and current research are also outlined (Tillett, C).

Taylor writes on automated authority control as a means to ensure that the user finds records. She suggests that the rules for references should be reviewed, that the kinds of authority records that most benefit the catalog user be taken into account, and that system designs for online catalogs that are "more forgiving" to searchers be investigated (Taylor, C).

Glazier describes the state of the art for authority control in the major U.S. bibliographic utilities, plus some options available in local systems. He provides analysis of problems and work flow facing catalogers, illustrates pros and cons of various methods, and includes a brief description of LSP as it pertains to NACO and sharing authority records between utilities (Glazier).

Two articles found in the law library literature describe the process of

standardizing headings on bibliographic records. Stone describes the Florida State University experience with vendor services for automated authority processing. In an analysis that can be used as a tool for planning a vendor authority project, she outlines what tasks the vendor can and cannot do well (Stone). A more comprehensive article by Dalehite compares authority control as provided by vendors to that provided by local system software. She includes a list of features offered by vendors and a checklist of items to consider in developing bid specifications (Dalehite).

Johnston reports on a survey she conducted into eighteen vendor-supplied authority control systems. Each vendor is rated on specific characteristics of authority functions (Johnston). Although these ratings provide a basic point of reference, Johnston unfortunately does not reveal which vendors possess which strengths. Crucial information needed by those selecting a new system is therefore lacking.

"Automated Authority Control in ARL Libraries" (Wittenbach) is a compendium of documents relating to the authority control process that were gathered from nineteen ARL libraries. The volume is an ARL SPEC Kit, including sample job descriptions for positions concerned with authority control, organizational charts, procedural documents on authority control within various organizations, sample authority work forms, and system reports related to authority processing.

SHARED CATALOGING

"Much Ado about Nothing: OCLC and RLIN Cataloging Quality" (Intner, A) reports the results of a comparison of record quality in OCLC and RLIN. No significant difference between the databases was found. Analysis of the errors reveals that most were made in applying AACR2 as interpreted by LC. Other errors noted were (in descending order of occurrence): punctuation, tagging and fixed fields, capitalization, spelling, call numbers, and subjects. Intner points out that these findings have implications for training and teaching the applications of LC's rule interpretations, choice of publisher dates and publishers' names from information given in books, proper order of notes, punctuation rules, and coding of the 008 field.

Taylor produced a new edition of *Cataloging with Copy: A Decision Maker's Handbook* (Taylor, A), which will assist those training staff to use records in bibliographic databases. This volume has been completely updated and includes a new chapter that emphasizes the use of cataloging copy in the machine-readable environment. Other topics of interest include database searching, editing matching copy or near copy, data input, authority control, and training. Moreover, the treatment of these topics in the new edition reflects more closely the ways most libraries currently obtain and use cataloging copy. As a result, this book is both a useful means of introducing students to the concepts of copy cataloging and an excellent tool to train staff in the copy cataloging unit.

The National Coordinated Cataloging Project (NCCP), planned and implemented by the Library of Congress, members of the Research Libraries Advisory Committee to OCLC (RLAC), and the Research Libraries

Group (RLG) is an effort to divide up the work of generating original cataloging records. "The National Coordinated Cataloging Program Pilot Project" (Baker) provides an overview of the planning efforts and the objectives of the project. Baker explains that the participants in NCCP, the Library of Congress, and selected research libraries will create authority records as well as supply LC subject headings and classification to bibliographic records. These records are to be distributed at first through LC's cataloging distribution service and later electronically through the Linked Systems Project (LSP). Two sources for a description of LSP and the plans to share authority and ultimately bibliographic records are "LSP and the Library Community: Present Status" (Avram, A) and "LSP: Implications for Our Libraries" (Gregor). Avram includes the priorities of the project and explains the progress on each of the priorities. Gregor goes beyond the immediate priorities to propose future directions for the linked systems' capabilities.

RETROSPECTIVE CONVERSION

For libraries that have not yet begun retrospective conversion of their collections, Beaumont and Cox have written a new "how to" reference. This volume is basic, thorough, and easy to read. The emphasis is on thinking through the needs of the library, guiding the planning process, selecting the employing standards, and exploring all available options. The authors offer a realistic approach to the task by taking into consideration compromises that must be made between cost and quality (Beaumont and Cox).

Two articles written this year address problems involving special portions of collections that have not yet been converted. Urbanski describes the preparation and planning necessary for an AV recon project, outlining many points that require clarification before such a project can begin (Urbanski). Nadeski describes the decisions made to handle unique problems of microform publications before they can be converted. One common problem libraries experience with microform collections is how to handle multiple versions of the same work. Although Nadeski reports that this problem was resolved during the conversion of the print collection, she does not share the solution with the reader in this article, which would have been helpful to those struggling with this problem (Nadeski).

MANAGEMENT

"Transition and Change: Technical Services at the Center" (Gapen) describes the reorganization of the libraries at the University of Wisconsin-Madison. After an internal evaluation of the services and programs currently available, departmental lines were redrawn. Most specifically, technical services departments were decentralized and integrated into the individual disciplinary libraries. The result has been staff members who are knowledgeable in all activities within their library and participate to a degree in all of them. Gapen calls this professional "the holistic librarian." McCombs in "Public and Technical Services: the Hidden Dialectic" does not support the sharing of cataloging and reference tasks. She believes that these tasks together are too diverse for one person to handle in a medium-sized to large library (McCombs).

Prabha reports on a study of cataloging work flow in four libraries to establish benchmark data for the time required to catalog an item using the OCLC online system. Although there are variations in the tasks measured between libraries, she finds that the amount of time required for full-level copy cataloging of nonfiction material was about 15 minutes per item. The amount of time required for original cataloging varied from 23.40 minutes to 52.86 minutes. Prabha notes that the increased time was directly related to the number of hands an item passes through during the cataloging process (Prabha).

Harris discusses a historical investigation of cataloging costs and finds they have risen faster than the rate of inflation since 1876—from \$.40 per volume to an average of \$17.17 per volume. Other trends identified by the author include: (1) the number of characters in Library of Congress cataloging copy between 1956 and 1981 has increased by 24 percent, (2) most academic libraries (82.9 percent) use OCLC as the chief source of bibliographic records, (3) a little over one-third of the academic libraries responding to the survey have a card catalog as its only public catalog, and (4) quality is the major concern of most academic libraries, quantity is second, and cost is third (Harris).

Several research libraries have reported that there has been a decrease in the availability of cataloging copy on national databases, which is causing cataloging backlogs to grow. Reid poses the question “. . . Is There a Crisis in Copy Cataloging?” and finds reason to suspect that records are being created on local systems but not being entered into the major bibliographic utilities (Reid).

EXPERT SYSTEMS

With a growing number of titles arriving in cataloging departments and a shortage of experienced catalogers, library managers are increasingly looking for automated assistance. “Expert systems” are beginning to offer a degree of promise in meeting this need. An expert system applies artificial intelligence to a knowledge base such as AACR2, using a series of inference procedures to solve problems. The typical expert systems being designed for descriptive cataloging guide the cataloger through the major decision points needed to create a bibliographic record. Such systems are discussed by Holthoff, and the nature of artificial intelligence and the concept of expert systems are considered (Holthoff). Hjerppe and Olander carry the discussion much further, describing in detail two expert systems operating in Sweden. In their current state, the systems select access points and identify main and added entries. The authors admit, however, that while it is feasible to create and operate an expert system that can manage standard cases of cataloging, one that could perform as well as an experienced human cataloger would require computer hardware beyond the means of most libraries. Creating sufficiently sophisticated software would be a further challenge (Hjerppe and Olander).

TEACHING, TRAINING, AND RECRUITING

Catalogers are in short supply and library schools continue to produce too few of them. Kovacs sees a remedy in more inspired teaching, arguing that interest in the discipline can be sparked or extinguished by the presen-

tation of the topic (Kovacs). The most comprehensive discussion of this topic, however, is *Recruiting, Educating, and Training Cataloging Librarians*, edited by Sheila S. Intner and Janet Swan Hill. This volume is the report of a seminar held at Simmons College on the shortage of librarians in technical services, especially cataloging. Matarazzo introduces the section on recruiting, discussing the forecasts of cataloger shortages and concluding that low salaries are the greatest obstacle to recruiting (Matarazzo). While Bishoff discusses recruiting and interviewing techniques as they apply to professionals, Futas and Zipkowitz discuss the potential for attracting nonprofessional library workers into the discipline, and Hoerman looks still further afield, recommending a scheme involving a network of librarians who could reach out to recruit individuals in remote geographic areas and persons with nonhumanities backgrounds.

Education is the theme of the second section of the volume. Robbins, in her keynote address, calls for energetic, inventive, creative teaching techniques to stir interest in cataloging (Robbins). Miksa examines the growing concern that library schools are omitting cataloging courses in their curricula but reports that an examination of the course offerings of a number of schools revealed that cataloging courses still figure highly in their curricula, though they may be offered under a different name (Miksa). Intner (B), Matthews, and Kovacs/Reichardt in their respective articles offer valuable information on effective teaching methods to develop cataloging skills.

In the third section Avram emphasizes the importance of high-quality, on-the-job training, now that cataloging is a national endeavor. Errors made in one locale will enter the national databases and be propagated widely (Avram, B). Fitzgerald describes the training program at Harvard, and Higgenbotham suggests that larger libraries could provide internships that would train librarians for smaller libraries.

CONCLUSION

The 1989 literature in the field of descriptive cataloging is both scholarly and practical. On the scholarly side, volumes of collected essays and articles on descriptive cataloging theory, authority control, new uses of technology, and new teaching methods were added to the literature. On the practical side, new and updated editions of cataloging handbooks and manuals were published to instruct beginning professionals as well as aid the practicing cataloger. Clearly, there is something of interest and importance to all practitioners in the discipline of descriptive cataloging.

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The Year's Work in Subject Analysis, 1989

Stephen S. Hearn

The year 1989 saw the publication of new editions of a number of standard subject analysis tools, including the twentieth edition of the *Dewey Decimal Classification*, the twelfth edition of *Library of Congress Subject Headings*, and the third edition of LC's *Subject Cataloging Manual*. The persistence of these and other long-standing guides to subject analysis does not indicate that the field is static; rather, they provide a stable context within which much thoughtful and inventive work is taking place.

What follows is a selective survey and bibliography of the past year's library and information science journal literature relating to that work in the field of subject analysis, control, and access. Also included in the bibliography are several surveys similar to this one that appeared in 1989 (Lancaster et al., Taylor, and Wolner).

CLASSIFICATION

The arrival of *DDC 20*, with its major revisions of the schedules for Data processing/Computer science and Music, more direct index structure, and expansion to four volumes to allow for the addition of a manual, has met with a generally favorable response from reviewers (Intner, Aman). Sanford Berman, however, arguing on behalf of practical necessity, questions the pursuit of a "more logical or architecturally superior" schedule when that effort significantly disrupts the order of already classified collections (Berman, p.46). As a remedy, Berman calls for better representation from the DDC user community in future editorial decision making. Berman himself receives kinder treatment in a profile by Pendergrast, which recounts Berman's parallel rebellion against the obscure terms and vestiges of racism and imperialism that he finds in *LCSH*.

Both Intner and Aman look forward in their reviews to the advent of DDC in MARC format. The progress toward a new MARC format for classifications at LC is described by Williamson in an article in *International Cataloguing and Bibliographic Control*. Major issues include whether to store full hierarchical data redundantly on each record or link records with partial data and accept a slower response time, and how to represent numbers currently in tables. Full data storage and the elimina-

tion of separate, referenced tables appear to have the edge. The involvement of DDC staff at LC in this project promises a format adaptable for a variety of classification systems.

Williamson also reported in 1989 on a conference held in November of 1988 at SUNY Albany, "Classification in the Computer Age." Presenters there included Irene Travis discussing artificial intelligence techniques to assist the work of classifiers; Elaine Svenonius on the need for an "ideal" classification system to be both hierarchical and polyhierarchical, faceted and enumerative; Karen Markey reporting on the mixed success of a project to derive class number captions from subject headings commonly associated with them; Williamson on the varied uses anticipated for the proposed MARC classification format; Francis Miksa calling for a return from current classification practices driven by literary warrant to the classification of concepts; and Richard Halsey on the need for theoretical as well as practical study of classification in library education. Williamson notes that conference proceedings are being prepared for publication.

Meanwhile, the major classifications in their present form have not been ignored. Iwuji demonstrates the gross inadequacies of both LCC and DDC in their treatment of African religion, history, ethnography, social sciences, languages, and literatures. Still, Iwuji argues against abandoning the standard systems for a separate Africana classification, calling instead for a coordinated effort at revision of LCC and DDC. Pacey makes a similar case against the scattering of third-world literatures that results from DDC's classing literature first by language, perpetuating imperialist attitudes toward third-world cultures. Pacey proposes a range of solutions from the pragmatic (subdivide under language by geography or culture) to the radical (overhaul DDC to class first by geography or culture).

Other classification systems also come under discussion in 1989. Dhyani reviews the Systematic tables volume of the *UDC International Medium Edition English Text*, noting such major changes as the relocation of Philology, Linguistics, and Languages from Class 4 to Class 8 (Literature), and the difficulty of using the tables without the index volume, scheduled for later publication. Husain studies the growth of Ranganathan's Colon Classification from 24 basic subjects in 1933 to 779 in the 1987 edition and concludes that the theoretical basis of the system has enabled it to better analyze new subjects and integrate them into the existing structure.

A system called Classaurus, derived from Ranganathan's and intended to generate by computer a classified list of thesaurus terms, is judged and found wanting by Biswas and Smith, who fault its present rigid syntax for handling bivalent, overlapping, and composite terms in confusing and arbitrary ways. Boyce, Douglass, and Rabalais offer a computerized sort procedure for Superintendent of Documents numbers, to be used to generate shelflists where SuDoc numbers are used for classification. For the slide librarian, Jonny Prins proposes a simple method for using textual lists accompanying slide sets to generate a subject file for slides classed by set number. *Media Access and Organization* by Carolyn O. Frost, also published in 1989, offers guidelines and bibliographies for classifying and cataloging the full range of nonprint materials.

Searching by Library Bibliographic Classification is already in use at the Lenin State Library in Moscow. Sukiasian points to LBC's analytic depth, independence from language, and widespread use in USSR libraries as factors influencing the decision to develop class number access as a method of online subject retrieval. Meanwhile, Lamonde would revive the 1876 edition of *DDC* as a standard system for classifying and analyzing nineteenth-century library collections and booksellers' catalogs, noting the 1876 *DDC*'s hierarchical structure and reflection of nineteenth-century concerns.

Table of contents data are the focus of two articles coauthored by DeHart. DeHart and Matthews study analytic entries in the *MLA Bibliography* for forty-five essay collections in French literature. They conclude that subject analytic descriptor terms are superior to simple indexing of chapter title words and urge that techniques to incorporate chapter analytic terminology and codes similar to the *MLA Bibliography*'s into library databases be explored. DeHart and Reitsma compare LC subject headings, work titles, chapter titles, and terms suggested by a subject specialist for thirty-one monographs in British economic history, concluding that subject headings and work title terms should be searched first and that table of contents data should then be scanned to evaluate the items retrieved. While better representation of table of contents data in library catalogs would almost certainly be welcome, the article's suggestion in passing that where chapter titles are lacking catalogers might supply them is rather alarming.

Two studies comparing retrieval by subject terms and by citation indexing find similar results: the retrieval of two substantial sets with relatively little overlap. In their paper, Pao and Worthen note that the sets retrieved by subject terms contain more relevant items and that for those few items in which the sets do intersect, the precision value is high. McCain looks also at the "novelty" of the retrieved items (i.e., whether they are "new" to the searcher) and observes that measures of the two methods' ability to retrieve novel items differ less in cases where the overlap between the two retrieval sets is greater.

Other proposals for improving subject access rely on programmatic changes to weight and rank the items retrieved. Pao and Worthen suggest that the overlaps between subject and citation searches might be used in this way. DeHart and Matthews note that the organizational structure of works as reflected in unit and chapter headings might provide a basis for weighting and ranking. Rada and Bicknell find *DISTANCE*, a statistical measure derived from the number of steps found along the path from one search term to another in a hierarchical thesaurus, to be a good predictor of relevance as judged by human searchers. They note that *DISTANCE* failures could usually be attributed to the presence of a nonhierarchical relationship. On the other hand, Carande calls for the addition of new "knowledge-indexing" fields to existing databases to make the nonhierarchical relationships between terms more explicit and searchable.

SUMMARY

Two broad trends emerge from this survey of the year's work in subject access. One is a clear consensus in favor of controlled vocabularies for

subject access, accompanied by an exploration of the ways different kinds of indexing and searching can be combined to improve retrieval. The second trend is an expanding interest in hierarchical classification and classified structures as ways of organizing access to information. The desire for clearer, more consistent hierarchies for subject analysis and access appears to be overcoming an earlier tolerance for the intrusion of polyhierarchies and the circularities of common language and human interests into these activities. Accommodating the latter tendencies while making subject access structures more logical will pose new challenges in the years to come.

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Standards and Linked Online Information Systems

Sally H. McCallum

Libraries are beginning to create a new automated environment by building their own computer-to-computer networks of information systems. In the process, they have been relaxing their adherence to standards, a practice that could lead to serious problems in the future. The areas in greatest need of standards are identified. Major issues contributing to the problem of lack of adequate standards are discussed.

The library community has always strongly supported standards, while carefully reserving the privilege of imposing local idiosyncracies onto the standard products it obtains. Thus, automation initially had a unifying effect on the library community as the bibliographic utilities were formed and local differences began to be retired. But as individual libraries have begun to install their own automated systems in recent years, there has been a relaxing of adherence to standards. This paper discusses why standards are as important in this new environment as they are in cooperatively maintained systems. It addresses standards issues related to linking systems and online catalogs and examines three areas—*communications standards, data format standards, and user interface and indexing standards.*

SHARING AND STANDARDS

Standards form the basis for all types of sharing, which in the library community can take many forms. The purpose of a library is to share intellectual information that has been recorded and usually published in some form. The recording of information adheres to a number of standards, including such basic ones as those for writing systems and languages. In an environment that uses the English language, for example, ideas can be shared more easily if they are recorded according to the standards of that language.

Libraries are required to provide another essential component for sharing information. They must provide access to material containing the information. To be able to share library resources efficiently, catalogs are created that describe and locate the material. If a catalog does not conform to internal standards, the searcher is confused and either loses material or

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spends an unnecessary amount of time trying to find it. One wonders how much time a public service librarian spends helping patrons cope with inconsistencies in library catalogs. It is not that technical services staff make bad catalogs, but that the library community has changed its standards over time, and no institution goes back and recatalogs everything—or even evaluates whether it needs recataloging. This fact was made particularly obvious by the major difficulties libraries faced in 1967 when *AACR* changed the basic descriptive cataloging standards and again in 1981 when *AACR2* overlaid yet another set of changes.

Consistency of description in a single catalog is sought by librarians, but consistency is needed not only within catalogs but between catalogs as well, particularly in light of the well-founded tradition of libraries' sharing cataloging data. At the Library of Congress, staff costs for cataloging one item come to approximately \$50. The primary reason staff costs are so high is because LC is rigorous with respect to standards. If, however, the standard cataloging record produced by LC can be used for copy cataloging by a number of other institutions because of the attention paid by LC staff to standards, then the total benefit of the record is high. The \$50 investment in standard records needs to be viewed against some sort of "benefit units."

The library community is aware of the value of internal consistency in a catalog and interlibrary consistency that produces savings through copy cataloging. A new type of sharing has now begun alternately to please and plague libraries, sharing the use of automated systems. Automated systems themselves are adamant about standards. Incorrectly keying a single character and mislabeling retrieval elements may be fatal for an item, e.g., if the subject "fog" is keyed in instead of "dog," readers may miss out on a good book about dogs, whereas persons investigating weather conditions will be amused (or annoyed) that their search turns up a volume on dogs.

Sharing the use of automated systems takes several forms. The most familiar is the phenomenon of the large bibliographic utility such as WLN, OCLC, and RLIN. In that environment a single, large computer is time-shared. The centralized system environment has had a standardizing effect on the content of catalog records themselves. Library managers have become painfully aware that they can use other records only if the records are standard, and likewise their own records are only usable by others if they conform to standards. Thus standards are necessary in the bibliographic utility environment both because the machine demands them and because they enhance the process of sharing with other users.

Librarians are now, however, increasingly involved in sharing between different automated systems. In the early 1980s, libraries began to install their own systems or parts of systems. Compatibility between the data obtained from the utility or other external cataloging systems and the data requirements for the local system became a standards issue. Utility-to-local system compatibility is dwarfed in comparison to the complications that arose when libraries started installing multiple local systems from different vendors at one site and expected the system components to interact with one another automatically. Vendors frequently are caught by the necessity to provide multiple interfaces to a number of other vendors' prod-

ucts in order to obtain sales. This is aptly illustrated by the number of interfaces to different online catalogs that the FAXON Company has recently announced that it is working to support. Another complexity occurred in the last few years as libraries began changing systems and replacing one vendor system, in which large amounts of data were stored, with another system. In these situations, standards are the keystone to maintaining flexibility in selecting systems.

Circulation systems have probably been the most affected by these developments. While bibliographic systems have had well-established data content and format standards derived from AACR2 and USMARC data element specifications that could be followed, circulation systems have not had standardly defined data elements. In addition, designers of circulation systems have tended to consider it unnecessary to follow the usual standards for the minimal bibliographic data they employ. As a result, many libraries have been caught in the trap of a system that will accept their data in MARC standard format as they come from the utility tapes but cannot output that data in USMARC to be used in the conversion to a new system.

In the mid-1980s intersystem sharing reached a new complexity with the implementation of computer-to-computer communication so that fully functional peer systems can be linked in a standard way. Computer-to-computer communication is defined by the functional relationship between two machines, not by their relative size. Thus, computer-to-computer includes large systems—the bibliographic utilities—and the growing numbers of local systems. This environment of communications standards is more dynamic than tape exchange. For a tape load, analysts can dump a few records, analyze their format, determine how they deviate from standards, and adjust the intake programs to accept them. With telecommunications there is no leisure to study the data and adjust programs. The records are sent and arrive almost simultaneously. They must follow a prespecified standard to the letter. That is one reason why until now there has been a great deal of development of communications within each vendor's system offerings, both utility systems and local systems, but very little telecommunications among systems.

COMMUNICATIONS STANDARDS

In the current environment a major requirement is for communications between peer computer systems. The standards required here are much more complex than those needed for communication between a terminal and a computer. In the latter case, the terminal is relatively dumb and is dominated by the computer. When systems are *peers*, they must negotiate exchange conventions and adhere to them rigidly. The required standards, called protocols in this environment, are now being developed by the National Information Standards Organization (NISO Z39), the American National Standards Institute (ANSI), and the International Organization for Standardization (ISO). The library community is experimenting with those standards in the Linked Systems Project (LSP), which is linking the RLIN, LC, and OCLC computer systems. This project, remote as it may seem from daily library activities, is already affecting any library that uses authority data. Using the LSP link, both RLIN and OCLC now pick up all

authority records that enter the LC file within hours and sometimes minutes from the time that LC completes the records. They are then available to users of those systems within a day of these transactions.

Fortunately, there *are* standards for computer-to-computer communications, both newly completed ones for basic communications and currently developing ones at the application level. These are the *Open System Interconnection* standards used for LSP. What, then, are the standards issues in this area?

The first issue is the fact that these new standards are *too* new, which causes the virtual pioneering situation with which any computer-to-computer project must cope. International standards-making bodies can be notoriously slow in developing standards. While the general specifications for the interconnection protocols were worked out in the early 1980s, still today not all the accompanying detailed standards are set. Computer-to-computer linkages have thus had to be implemented using in some cases drafts or outlines of standards. This means that in the next five years implementers will have to spend additional effort improving their interconnection software to meet the completed standards fully.

In addition, these pioneer implementations have to be largely developed from scratch at each site since only a part of the communications capability can be purchased, ready for installation, along with computer hardware. In the next few years communications software based on the ISO standards will become available from the computer manufacturers.

The lack of available open system software packages causes added difficulty for agencies trying to develop linkages. There are other communications packages now available. They are not standard and are based on older technology and constraints. In fact, experience with them was a vital component in the development of the open system protocols. Two examples of these protocols are SNA, developed by IBM, and TCP/IP, originally developed by the Department of Defense. The existence of these alternatives causes problems and difficult decisions for institutions. LC has had to face the dilemma itself since it is an IBM user and uses SNA for certain purposes. LC felt it necessary, however, to adopt the ISO standards for system linkages, even in the pioneering mode, rather than attempt to persuade its linking partners to adopt a nonstandard, but more readily available, protocol. IBM has now begun offering the standard open system protocol itself, first in Europe in 1985, with an improved version due for the United States market in 1990.

Another problem is that the international open communications standards also share a characteristic with many standards—including *AACR2*. They allow for options. Thus decisions on options need to be agreed upon before implementation. As libraries look toward using manufacturer-supplied software for ISO standard communications, they will need assurance that these products from DEC, IBM, Comten, DG, and others will truly work with one another. Communication will simply not work if one site purchases an ISO standard communication product with "transport layer class 1" and another installs a fully conforming ISO communication product with "transport layer class 2."

The library community will need to reach consensus on options and en-

sure that testing facilities and trustworthy certification procedures are available. Librarians have learned over the last ten years that it is not always sufficient to tell a vendor what is required, receive an answer such as, "Of course we follow those standards," and then expect the right thing to happen. Telecommunication is of such complexity that the vendors may indeed have good-faith answers although their systems do not meet the requirements in the end.

DATA STANDARDS

A second area of great concern when data are exchanged between systems and when one system is exchanged for another is the form and format of the data. It has been common for system designers to provide a standard intake facility based on USMARC. However, once the data are within a particular system, it may discard data elements and/or content designation not needed by it. This inhibits moving data from one system to another, either to a replacement or to one with which computer-to-computer communication is being attempted. This is one reason why in the Linked Systems Project there has always been full agreement that all records must be exchanged in USMARC, both when files are being transferred and when search result sets are returned.

In this area there are a number of widely used standards, especially for data in the bibliographic record—*AACR2* for description, *LCSH* for subjects, *LC* and *Dewey* for classification, and *USMARC* for data format. As automated systems expand to include other types of data, especially that which have been considered local and not subject to standardization, problems are encountered. There is the need, in some instances, to create data on an external system and bring them into the local system. More critical, however, is the need to be able to purchase systems that carry out local functions. This is system sharing of a different kind.

One category of local data is that closely associated with data already included in USMARC. USMARC formats now support a limited amount of local data. For example, a subfield in bibliographic records can indicate that the information in a field is institution and item specific. Also, the USMARC holdings format is, in one sense, largely local data since it records information concerning the holdings of a specific library. A recent change to the holdings format was in response to a not uncommon situation concerning local information. Some libraries create holdings records on one system and then bring them back to their local system to load. They need to be able to record local "staff" notes within a field, a feature previously unavailable in USMARC, which only provided for public notes. Rather than have each implementer make a different choice concerning where and how these local data would be recorded, the format was changed to give them a standard location.

Another type of local data that is useful to associate with bibliographic records is preservation information. Work was recently completed on developing a listing of data elements and identifying a place in the format for the data. There is, however, a debate on where to stop and what is really local as opposed to somewhat local. The current approach is to include only preservation information that might be interesting to another institu-

tion. Meanwhile, locally, additional preservation information will probably need to be collected. If individual local libraries collect and format that information differently, they will not be able to realize the benefits of buying a standard system from a vendor at a later stage without, perhaps, having to rekey the local preservation data.

It has been easier for the library community to reach consensus on standards for bibliographic and its associated data than for other types of data, a critical one being circulation system data. Neither NISO nor the American Library Association has tackled development of a data element list, much less an exchange format standard for circulation data. Yet these standards have become increasingly important since many libraries selected circulation systems in the middle to late 1970s and are ready now to select a new model.

Work finally began at the initiative of the circulation system vendors themselves when an ad hoc group called Automation Vendor Interface Advisory Committee (AVIAC) was formed. That group has completed a listing that specifies minimal and expected data elements that should be supported by circulation systems. It has taken into account the requirement that in some cases the circulation system should serve also as a minicatalog. It also looked at the interlibrary and reciprocal borrowing functions that need to be supported as different circulation systems are linked in a computer-to-computer environment. The AVIAC work has been submitted to NISO to be further developed into a national standard.

USER INTERFACE STANDARDS

Another area where standards are essential for the online catalog is that of user interfaces. There has been a long period of innovative creation of user interfaces, but if patrons are going to be confronted by an online catalog at each library they visit, the community must provide them some degree of consistency in the manipulation of the systems. There are three issues for possible standardization here—the user command syntax, the indexing choices, and the online assistance or help. Online assistance or help is probably not a standards topic, but the first two certainly are.

Efforts have been made to establish a basic standard command syntax for the last seven to eight years. In the early years, participants found agreement impossible because so much was invested in existing systems. These early efforts were largely undertaken by the Abstracting & Indexing services (A&I) database vendors. Then in the last few years libraries became concerned as they began designing online catalogs. As a result they have made considerable progress toward a standard in this area. NISO is currently seeking agreement on a common command language standard. Because of this work, the United States has been able to have significant influence on the international standard for command language that is developing. Fortunately, that standard is based on the English language.

A common command syntax will still be confusing under some circumstances if there is not consistency in indexing practices. For example, if the common command, "FIND title (word)" goes against an index where only the 245 field is indexed in one database and the 245 and titles in author-title added entries are indexed in another, then the user will get dif-

ferent results. It would be useful if at least generally accepted guidelines could be established that associate the standard commands with expected indexing. This is an area in which formal standards may not be feasible but guideline standards would be beneficial.

In the area of user interface standards one frequently hears the counterargument that such standards will stifle innovation. Library automation probably has reached the point of development where commonality between search systems can be identified and agreement reached on standard terminology in those areas. It will not mean that system designers cannot develop more exotic ways to access data but that the conventional ways will be consistent.

CONCLUSION

There are three major areas where standardization is needed as libraries move into the linked OPAC environment: communications, data, and user interface. Fortunately, many standards exist and others are under development, but there are still dilemmas. In communications the major problems are the slowness of standards development and the need for a mechanism that verifies that software does indeed meet standards and will allow interworking with other standard implementations. In the data area the old distinctions between standard global data and "as you like it" local data are no longer valid. Libraries that want to buy local systems from a vendor or to change local systems may be caught in a data-conversion problem that standards required up front would have helped to avoid. There is sensitivity, however, about standards for local data. Finally, there is debate in the user interface area over innovation versus standards.

By noting the problems, the intent has been not to discourage but to increase awareness of the issues that impede progress. The standards mentioned are essential to the kinds of linkages that libraries will need in the next decade. Librarians must strive to see that the standards process provides them with the kinds of linkages they need. They then must avoid the temptation to take shortcuts in their work by not following the standards in order to reap very short-term benefits. Care needs to be taken to ensure that standards are specified in all system procurements.

Modeling an Academic Approval Program

John C. Calhoun, James K. Bracken, and
Kenneth L. Firestein

A model for core-collection development appropriate for large and medium-sized research libraries is proposed. A strategy of mechanical selection is suggested that will ensure the quality of core selection as well as release selectors from the burden of core selection so they might spend more time identifying difficult materials.

We read with interest a *LRTS* article by Charles W. Brownson entitled "Mechanical Selection," which investigates the usefulness of mechanical versus expert selection and argues for more quantification in selection practice.¹ Before that, a *C&RL* article by Karen A. Schmidt entitled "Capturing the Mainstream," compares the viability of publisher- and subject-based plans for academic libraries in both domestic and international markets and presents the case for the overriding success of a publisher-based plan for domestic publications and a subject-based plan for international markets.² We believe a rationale for more quantification in selection practice, in the form of a publisher-based plan for the domestic market, is nascent in an extant principle of collection management; and we offer below an explanation of how that principle—a corollary to the 80/20 rule—might be used in collection development to model an academic approval program.

A 1969 article by Richard W. Trueswell offers the clearest statement of "the 80/20 rule"—a characteristic of inventory in business that approximately 80 percent of the number of transactions taken from a warehouse represents about 20 percent of the items stocked. With graphs of circulation versus holdings that show circulation taken from several libraries, the author illustrates the similarities between business-inventory holdings and book circulation, and concludes that some of the techniques used for managing business inventories are applicable to libraries.³

Our analysis of the "Outstanding Academic Books" that appeared in the May issues of *Choice* during a recent ten-year period suggests a similar

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80/20 pattern: 80 percent of these titles are by 20 percent of the publishers. This 80/20 core is split into disparate halves: 2,315 "Outstanding Academic Books," primarily in the humanities and the social and behavioral sciences, have been produced by forty-seven university presses; while 2,258 "Outstanding Academic Books," primarily in reference and in science and technology, have been produced by eighty-three commercial publishers. The average yearly output of the university presses of the core is 3,589 titles, while that of the commercial publishers is 11,464. The challenge for a medium-sized research library, which cannot afford to gather the entire 80/20 core mechanically, but still wishes to bring in a substantial portion of the commercial half of the core through these means, is to choose between one of three possible strategies: (1) gather those publishers that provide the best ratio of "Outstanding Academic Books" to total titles issued; (2) gather those publishers that provide the most "Outstanding Academic Books"; or (3) gather those publishers whose "Outstanding Academic Books" categories, together with those of the university core, provide an even coverage so that collection balance is maintained. This article suggests methods and estimates costs for each of those strategies. While these are not the only means of getting useful material into the library, we believe this information can be used for a mechanical selection of a substantial portion of the domestic mainstream, which Schmidt spoke of capturing with a publisher-based approval plan. The efficiency of selectors will be improved by shifting the burden of core selection away from expertise in order to permit their knowledge of subject areas to be spent identifying fugitive and difficult materials.

METHODOLOGY

To prove the 80/20 corollary, we built a *dBASE* file indexing the "Outstanding Academic Books" from the May issues of *Choice* based on Koenig's network model.⁴ The normalization process establishes authoritative forms for the publishers that can then be profiled in vertical spreadsheet format by subjects and revised by years.

The composite profile of table 1 indicates there were 524 "Outstanding Academic Books" in reference, 1,943 in humanities, 983 in science and technology, and 2,255 in social and behavioral sciences during the ten-year period. During that same period, Harper & Row had five "Outstanding Academic Books" in reference, twenty-six in humanities, nine in science and technology, and thirty in social and behavioral sciences, and Wiley had ten "Outstanding Academic Books" in reference, one in humanities, ninety-one in science and technology, and twenty in social and behavioral sciences.

With a program that includes a conditional statement for nine or more occurrences of a publisher, it is possible to create a subset of the original file containing 4,573 "Outstanding Academic Books" by 130 publishers; and since the original file contains 5,705 "Outstanding Academic Books" by 705 publishers, we call this subset the "80/20 core." It is also possible to break the 80/20 core into two almost equal pieces—one containing 2,258 "Outstanding Academic Books" by eighty-three scholarly and trade publishers, and the other 2,315 "Outstanding Academic Books" by forty-seven university presses.

TABLE 1
TEN-YEAR SUBJECT PROFILES

Choice Categories	"Outstanding Academic Books," 1978-1987	Harper & Row	Wiley
Reference	508	5	10
General	16	0	0
Reference	524	5	10
Humanities	62	1	0
Art	265	6	1
Photography	38	0	0
Communication Arts	44	0	0
Classical Studies	85	0	0
Language/Literature	103	0	0
English/American	466	7	0
Germanic	50	1	0
Romance	106	1	0
Slavic	38	0	0
Other	52	0	0
Performing Arts	11	0	0
Dance	22	0	0
Film	62	1	0
Music	131	2	0
Theater	45	0	0
Philosophy	159	1	0
Religion	204	6	0
Humanities	1,943	26	1
Science/Technology	120	4	6
History of Science	89	2	1
Astronautics/Astronomy	25	0	0
Biology	92	0	9
Botany	31	0	2
Zoology	66	0	0
Chemistry	43	0	12
Earth Sciences	51	0	7
Engineering	144	2	23
Health Sciences	114	0	4
Information/Computer Science	62	0	4
Mathematics	53	0	10
Physics	45	0	12
Sports/Physical Education	48	1	1
Science/Technology	983	9	91
Social/Behavioral Science	133	1	3
Anthropology	106	0	0
Business/Management/Labor	145	1	8
Economics	266	1	4
Education	94	3	1
History/Geography/Area Studies	90	0	0
Africa	32	1	0
Asia/Oceania	64	2	0
Europe	245	4	0

Continued on next page

TABLE 1 Cont.
TEN-YEAR SUBJECT PROFILES

Choice Categories	"Outstanding Academic Books," 1978-1987	Harper & Row	Wiley
Latin America/Caribbean	40	0	0
Middle East/North Africa	42	1	0
North America	266	8	0
Political Science	327	4	0
Law	44	0	0
Psychology	152	3	4
Sociology	209	1	0
Social/Behavioral Science	2,255	30	20
All Categories	5,705	70	122

METHODOLOGY, PART II

Either of the bibliographic tools currently available in compact-disc format—*Books In Print Plus* by the R. R. Bowker Company or *Wilsondisc Cumulative Book Index* by the H. W. Wilson Company—might be used to establish authoritative forms for the publishers in our file, but only one of them excludes reprints. This is important for the second part of our methodology, establishing, on an objective basis, the new titles produced each year by the core publishers. Both *BIP Plus* and *Wilsondisc CBI* have an advantage over traditional print sources such as *Literary Market Place* in that they are enumerative—we can list out individual titles of a publisher and year to verify statistics about which we might be skeptical—but *Wilsondisc CBI* has the additional advantage of including only new titles (*BIP Plus*, which includes reprints, does not, so far, offer any way to drop these out of a search).

Using this tool we can find the most authoritative name for each of the commercial publishers or university presses from the 80/20 core (see appendixes A and B). The commercial publishers that make up the three gathering plans considered are listed in table 2. Using the same tool, we can find the number of titles produced by the same publishers and presses for the period 1982-1987 and the yearly average for each appears in the first column. Using our dBase file, we can find the number of "Outstanding Academic Books" produced by the same publishers and presses for the period 1978-1987; and we give the yearly average for each in the second column. We have indexed the same publishers or presses against "Oxbridge" (Oxford Univ. Press/Clarendon Press and Cambridge Univ. Press), which produces, on the average, an "Outstanding Academic Book" for every twenty-five titles,⁶ and the index value for each is given in the third column.

In a previous study, we compared these publishers and presses to one another individually; but in this study, generic publishers and presses are compared to each other more generally. The commercial publishers of appendix A produce an annual average of 11,464 titles, while the university presses of appendix B produce an annual average of 3,589 titles. At the \$35 per academic title suggested in the March 1988 issue of *Choice*, a large

TABLE 2
PUBLISHERS OF GATHERING PLANS

Commercial Publisher	<i>Cumulative Book Index Average</i>	"Outstanding Academic Book" Average	"Oxbridge" Index
Abbeville Press	18.0	1.1	1.56
Abrams	44.0	2.1	1.22
Academic Press	225.2	7.9	0.90
Allen & Unwin	123.5	3.7	0.77
Archon Bks.	18.2	0.9	1.26
AVI	14.3	0.9	1.61
Ballinger	35.8	1.9	1.36
Barnes & Noble	14.5	1.9	3.35
Basic Bks.	39.8	5.7	3.66
Beacon Press	24.0	0.9	0.96
Brookings Institution	22.8	2.3	2.58
Facts on File	83.0	2.4	0.74
Free Press	51.2	5.5	2.75
Freeman, W. H.	33.7	1.8	1.37
Garland	318.8	3.6	0.29
Godine	21.2	1.0	1.21
Greenwood Press	316.8	12.0	0.97
Hall, G. K. & Co.	158.3	2.5	0.40
Halsted Press	51.8	2.5	1.23
Harper & Row	471.0	7.0	0.38
Holmes & Meier	21.8	2.2	2.58
Hoover Institution Press	20.7	0.9	1.11
Humanities Press	11.5	1.3	2.89
Jossey-Bass	46.0	2.1	1.17
Knopf	174.7	5.9	0.86
Lexington Bks.	102.5	3.6	0.90
McGraw-Hill	390.5	5.3	0.35
New York Graphic Soc.	10.7	0.9	2.15
Norton	167.3	6.2	0.95
Orbis Bks.	32.8	1.0	0.78
Pantheon Bks.	96.2	4.1	1.09
Plenum Press	191.7	3.4	0.45
Praeger Pubs.	143.5	6.0	1.07
Prentice-Hall	832.7	6.9	0.21
Rizzoli Int. Publs.	37.2	2.1	1.44
Routledge & Kegan Paul	116.7	4.5	0.99
Rowman & Allanheld	23.2	1.1	1.21
Rowman & Littlefield	15.7	1.9	3.09
Russell Sage Foundation	2.7	0.9	8.52
Scarecrow Press	79.0	2.7	0.87
Schirmer Bks.	6.2	1.2	4.95
Sharpe, M. E.	23.2	0.9	0.99
Springer-Verlag	445.3	4.7	0.27
St. Martin's Press	553.8	9.1	0.42
Thames & Hudson	48.3	2.2	1.16
Twayne Pubs.	71.3	2.7	0.97
Ungar	28.2	0.9	0.82
Westview Press	158.7	4.5	0.72
Wiley	687.7	12.2	0.45

research library could purchase the commercial-publisher half of the 80/20 core for approximately \$400,000 and the university-press half for about \$125,000. It might well consider the \$525,000 this would require every year to be money well spent, since in so doing, it was ensuring through mechanical selection the timely appearance in its collection of the domestic mainstream, and, more importantly, with the reduction in drudgery, enabling its selectors to concentrate on the truly professional aspects of their work.

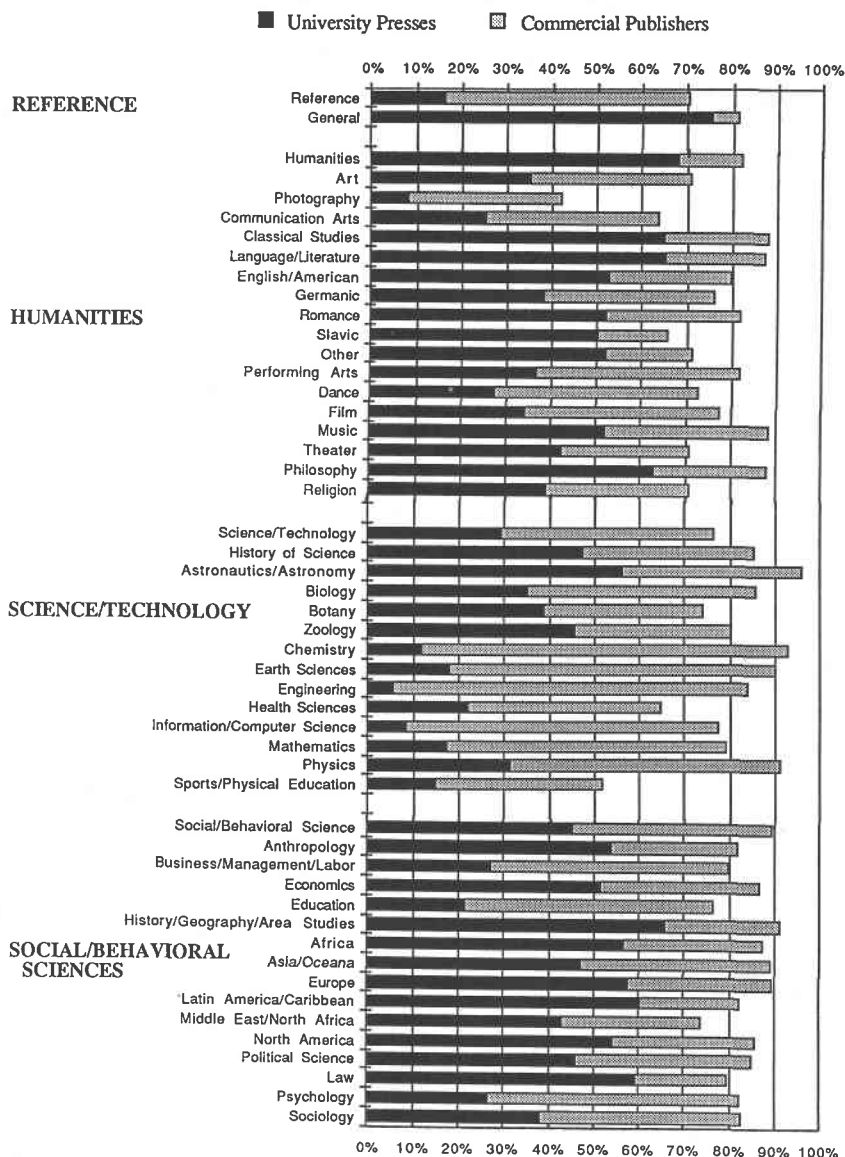
APPLICATION

This argument, while it makes sense for a full-sized research library, is less convincing for a medium-sized research library, which, although it might be able to afford the \$125,000 required every year to gather the university-press half of the 80/20 core, might not be able to afford the \$400,000 required for the commercial core. How it decides to handle this problem will have an effect on its collection, since the dispersal of "Outstanding Academic Books" by commercial publishers and university presses is not even throughout the subject categories. Figure 1 shows the detailed subject categories from the 80/20 core as percentages of the detailed subject categories from the overall profile. The commercial half of the core supplies most of its share of the "Outstanding Academic Books" in reference and science and technology, and the university half most of its share in humanities and social and behavioral sciences.

We believe a medium-sized research library might want to consider one of several plans to gather a substantial portion of commercial publishers from the 80/20 core. The first would be to arrange for a slips program for the commercial core from which its selectors might choose *some* Harper & Row titles, *some* Wiley titles, and so on. The burden on the bibliographers could be lightened somewhat by furnishing them with an array of publisher lists for the subject categories (easy to do with the dBase file we have built); but a slips program would not permit the hands-on evaluation of each title that a gathering plan would. Selectors might be tempted to save slips until they could choose among them on the basis of reviews, which would retard the *timely* appearance in the collection of important titles.

The second and third plans a medium-sized research library might consider would be to create a subset that provided the best ratio of "Outstanding Academic Books" to total titles issued, or that provided the most "Outstanding Academic Books." The summary effect of either plan is shown in figure 2. The first subset is made up of forty commercial publishers from the 80/20 core, each of which issues no more than three dozen titles for every "Outstanding Academic Books" title that it produces (or has an index relating it to "Oxbridge" above .71); and the second subset is made up of twenty commercial publishers from the 80/20 core, each of which has produced at least thirty-four "Outstanding Academic Books" in the last ten years. We have shown the subject categories from these subsets, together with those from the university core, as percentages of the subject categories from the overall profile.

The cost of gathering the first subset of forty commercial publishers can be determined by adding the average number of total titles each publisher

Illustration 1: 80/20 Core by Choice CategoriesFigure 1. 80/20 Core by *Choice* Categories

produces and multiplying that by the average cost of an academic title quoted above ($2,575.9 \times \$35$, or $\$90,156.50$). This plan could be extended to bring in an additional thirty-one "Outstanding" titles per year by creating a similar subset from the non-core publishers—gathering those with three or more "Outstanding Academic Books" in the ten-year period that were producing at least one outstanding title for every three dozen

published. The cost of buying these sixty-six additional publishers could be determined the same way ($531.2 \times \$35$, or \$18,592). Adding all three costs together, we achieve the maximal application of this strategy, gathering two-thirds of the "Outstanding Academic Books" for less than half the cost of gathering the four-fifths that the 80/20 core alone represents—a very attractive financial inducement.

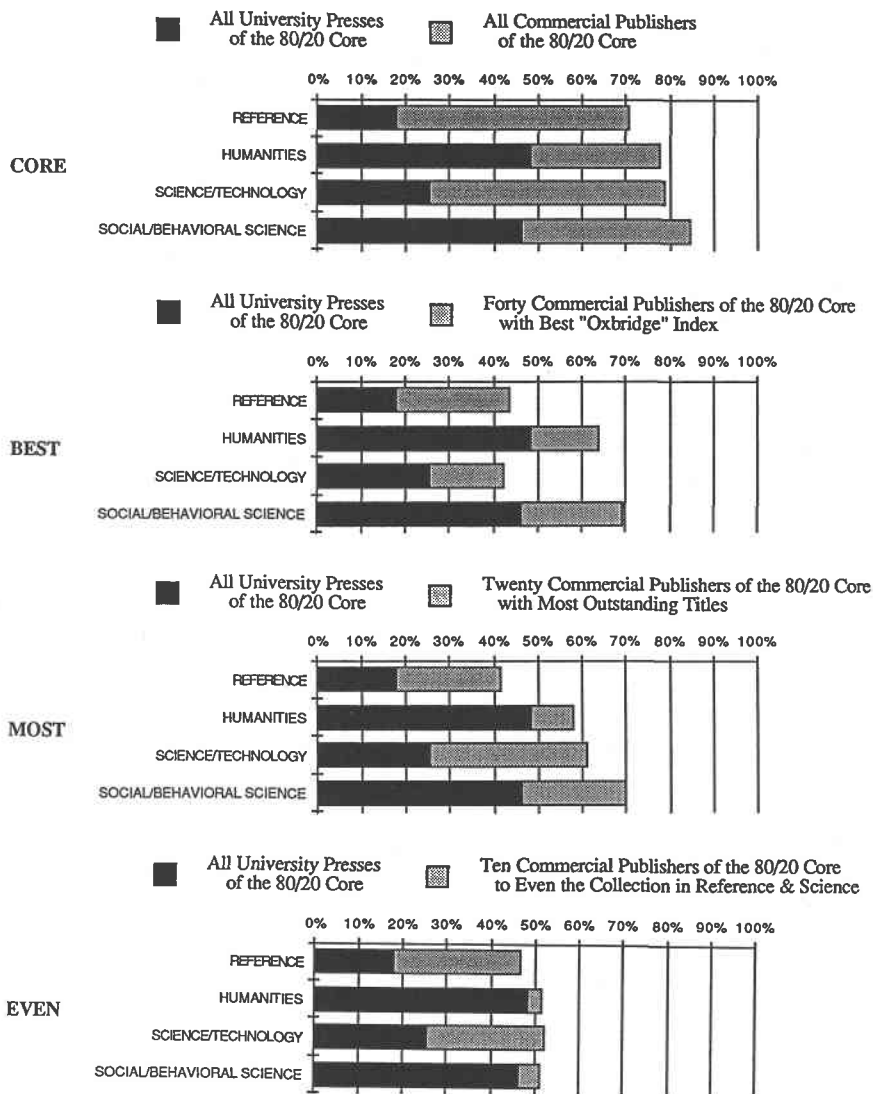
The effect of such a plan on the general subject categories is shown in figure 2 also: It would bring in three-fifths of the "Outstanding Academic Books" overall, two-thirds of the "Outstanding Academic Books" in humanities and social and behavioral sciences, and less than half of the "Outstanding Academic Books" in reference and science and technology. Adding the sixty-six non-core publishers would exaggerate this imbalance even more: It would bring in two-thirds of the "Outstanding Academic Books" overall, three-fourths of the "Outstanding Academic Books" in humanities and social and behavioral sciences, and only half of the "Outstanding Academic Books" in reference and science and technology. Unless we were willing to offset this somehow—by doubling the firm order allotments in reference and science and technology, let us say—a radical imbalance would result in the collection.

The cost of gathering the second subset of twenty commercial publishers can be determined, similarly, by adding the average number of total titles each produces and multiplying that by the average cost of an academic title quoted above ($5,607.6 \times \$35$, or \$196,266). This is twice the cost to gather virtually the same number of "Outstanding Academic Books," but the effect on the subject categories is much less radical. Figure 2 shows it would bring in three-fifths of the "Outstanding Academic Books" in the humanities, science and technology, and social and behavioral sciences, but only two-fifths of the "Outstanding Academic Books" in reference. This is a much less serious imbalance—one that a medium-sized research library might be willing to accept, since a perfect balance could be achieved only by limiting the subset to ten commercial publishers from the 80/20 core with an emphasis in the areas of reference and science and technology. The effect of this limitation is shown in figure 2 as well, though we believe most medium-sized research libraries will find the cost of gathering a subset of only ten publishers to maximize such a plan ($3,537.3 \times \$35$, or \$123,805.50) not worth the result (about half the number of "Outstanding Academic Books" from either of the plans we examine above).

CONCLUSION

Mechanical selection of the academic mainstream would cost approximately \$525,000; and we believe, for a full-sized research library, that might be money well spent—first, to guarantee the timely arrival in its collection of four-fifths of the "Outstanding Academic Books" that will appear; and second, to free its bibliographers from the burden of core selection so they might spend more time identifying fugitive and difficult materials.

Mechanical selection of something less than the 80/20 core will pose problems for a medium-sized research library—either with regard to the selectors having to choose individual titles from the commercial publishers

Illustration 2: Summary Displays of Choice CategoriesFigure 2. Summary Displays of *Choice* Categories

of the 80/20 core, or with maintaining a balance between the subject categories of the overall profile, or with keeping the cost of the gathering plan within reasonable bounds. Which of these plans a medium-sized research library chooses is largely a matter of style, and we do not mean to imply that the mechanical plans we have suggested are the only means of getting worthwhile books into the library. Some may prefer to use the services of a trustworthy vendor, whose experience with the university presses and commercial publishers of the 80/20 core is not limited by the biases of a single collection; while others might reasonably decide to combine the uni-

versity presses or commercial publishers of the 80/20 core with subject descriptors in order to limit, perhaps radically, the number of titles that would come on approval. But no matter what strategy a library may choose, the technology we have employed can provide its bibliographers with useful tools, not only to help with the 80/20 core, but also the much larger number of outstanding non-core presses and publishers. Subject specialists, armed with this new tool, might become successful explorers of what was previously something of a bibliographic terra incognita, now indexed or oriented to a known standard (i.e., "Oxbridge"). An intelligent subject specialist who is possessed of such a guide is no more obligated to buy every last title by Basic Books or Free Press (to name two of our own favorites) than a seasoned traveler armed with a Baedeker must see every last view of the Acropolis or the Parthenon. By providing lists by subject, or reallocating the firm-order budget to compensate for the effect of a limited gathering plan, or setting aside enough money to cover a realistic gathering plan among the commercial publishers of the 80/20 core, we still make intelligent choices as librarians. And if we do our work well, we gain the leisure to explore the larger bibliographic world, which cannot be acquired so easily through mechanical selection.

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3. Richard W. Trueswell, "Some Behavior Patterns of Library Users: The 80/20 Rule," *Wilson Library Bulletin* 43, no.5:458-61 (Jan. 1969).
4. M. E. D. Koenig, "Data Relationships: Bibliographic Information Retrieval Systems and Database Management Systems," *Information Technology and Libraries* 4, no.3:247-72 (Sept. 1985).
5. The subjects and years must be normalized as well, since *Choice* has introduced several new categories during the last ten years ("Botany" and "Zoology" from "Biology," and "Law" from "Political Science"), and combined some old ones ("Ancient History" with "Classics," and "Linguistics" with "Language")—and has begun to call its March through February annual cumulations by the second of the two years involved. We have applied the new categories retrospectively to records in "Biology" with an LC class of QK and QL and to records in "Political Science" with an LC class of K, and maintained the earlier system of referring to the annual cumulations by the first of the two years involved. The ten-year profile for composite or individual publishers is displayed in a vertical spread-sheet format for the fifty *Choice* subject categories, and the profile is subtotaled to characterize each publisher more generally. Thus, besides saying specifically that Harper & Row's strongest categories are "North America," "English and American," "Art," and "Religion," or that Wiley's are "Engineering," "Chemistry," "Physics," and "Mathematics," we can also say more generally that their profiles are complementary, since the first emphasizes humanities and social and behavioral sciences, and the second, science and technology.
6. Since *Choice* treats both Oxford Univ. Press and Clarendon Press as though they were a single imprint, we have followed that practice here in assigning the ratio we use $(830.3 + 575.8) / (30.5 + 24.5)$ as an index value of 1.0.
7. John C. Calhoun and James K. Bracken, "An Index of Publisher Quality for the Academic Library," *College & Research Libraries* 44, no.3:257-59 (May 1983).

APPENDIX A

COMMERCIAL PUBLISHER	CUMULATIVE BOOK INDEX AVERAGE	"OUTSTANDING ACADEMIC BOOK" AVERAGE	"OXBRIDGE" INDEX
Abbeville Press ^b	18.0	1.1	1.56*
Abrams ^b	44.0	2.1	1.22*
Academic Press ^{emb}	225.2*	7.9*	0.90*
Addison-Wesley	150.0	1.9	0.32
Allen & Unwin ^{mb}	123.5	3.7*	0.77*
Archon Bks. ^b	18.2	0.9	1.26*
Atheneum Pubs.	181.5	1.2	0.17
AVI ^b	14.3	0.9	1.61*
Ballinger ^b	35.8	1.9	1.36*
Barnes & Noble ^b	14.5	1.9	3.35*
Basic Bks. ^{mb}	39.8	5.7*	3.66*
Beacon Press ^b	24.0	0.9	0.96*
Blackwell	116.8	1.9	0.42
Bowker	42.7	1.0	0.60
Brookings Institution ^b	22.8	2.3	2.58*
Doubleday	300.8	1.3	0.11
Dutton	131.0	0.9	0.18
Eerdmans	54.5	1.1	0.52
Erlbaum	40.8	1.0	0.63
Faber & Faber	130.5	1.0	0.20
Facts on File ^{eb}	83.0*	2.4	0.74*
Farrar, Straus & Giroux	50.5	1.4	0.71
Fortress Press	55.0	1.5	0.70
Free Press ^{mb}	51.2	5.5*	2.75*
Freeman, W. H. ^b	33.7	1.8	1.37*
Gale Res.	96.2	1.8	0.48
Garland ^{em}	318.8*	3.6*	0.29
Godine ^b	21.2	1.0	1.21*
Greenwood Press ^{emb}	316.8*	12.0*	0.97*
Hall, G. K. & Co. ^c	158.3*	2.5	0.40
Halsted Press ^b	51.8	2.5	1.23*
Harper & Row ^m	471.0	7.0*	0.38
Holmes & Meier ^b	21.8	2.2	2.58*
Holt, Rinehart & Winston	189.5	1.4	0.19
Hoover Institution Press ^b	20.7	0.9	1.11*
Houghton Mifflin	194.2	1.8	0.24
Humanities Press ^b	11.5	1.3	2.89*
Jossey-Bass ^b	46.0	2.1	1.17*
Knopf ^{mb}	174.7	5.9*	0.86*
Lexington Bks. ^{mb}	102.5	3.6*	0.90*
Libraries Unlimited	37.0	1.0	0.69
Little, Brown	233.8	2.7	0.30
Longman	179.5	3.0	0.43
Macmillan	288.2	2.8	0.25
McGraw-Hill ^{em}	390.5*	5.3*	0.35
Methuen	120.2	2.7	0.57
Morrow	181.7	1.2	0.17
New York Graphic Soc. ^b	10.7	0.9	2.15*
Norton ^{mb}	167.3	6.2*	0.95*
Orbis Bks. ^b	32.8	1.0	0.78*
Pantheon Bks. ^{mb}	96.2	4.1*	1.09*
Pergamon Press	213.0	2.7	0.32
Plenum Press ^m	191.7	3.4*	0.45
Praeger Pubs. ^{mb}	143.5	6.0*	1.07*
Prentice-Hall ^{em}	832.7*	6.9*	0.21

Putnam	120.2	1.1	0.23
Random House	252.5	3.0	0.30
Rizzoli Int. Publs. ^b	37.2	2.1	1.44*
Routledge & Kegan Paul ^{mb}	116.7	4.5*	0.99*
Rowman & Allanheld ^b	23.2	1.1	1.21*
Rowman & Littlefield ^b	15.7	1.9	3.09*
Russell Sage Foundation ^b	2.7	0.9	8.52*
Sage Publs.	106.8	1.2	0.29
Scarecrow Press ^{eb}	79.0*	2.7	0.87*
Schirmer Bks. ^b	6.2	1.2	4.95*
Schocken Bks.	42.0	1.1	0.67
Scribner	142.3	2.6	0.47
Sharpe, M. E. ^b	23.2	0.9	0.99*
Simon & Schuster	238.8	2.4	0.26
Springer-Verlag ^{em}	445.3*	4.7*	0.27
St. Martin's Press ^m	553.8	9.1*	0.42
Thames & Hudson ^b	48.3	2.2	1.16*
Thomas, C. C.	128.0	0.9	0.18
Transaction Bks.	41.7	1.1	0.67
Twayne Pubs. ^b	71.3	2.7	0.97*
UMI Res. Press	79.0	1.1	0.36
Ungar ^b	28.2	0.9	0.82*
University Press of Am.	298.2	0.9	0.08
Van Nostrand Reinhold	176.2	2.5	0.36
Viking	177.3	2.6	0.37
Westminster Press	48.0	1.0	0.53
Westview Press ^{mb}	158.7	4.5*	0.72*
Wiley ^{em}	687.7*	12.2*	0.45

Note: We have added a superscript "b" to distinguish the forty commercial publishers that have the best "Oxbridge" index values, starring those figures in the third column; we have added a superscript "m" to distinguish the twenty commercial publishers that have the most "Outstanding Academic Books," starring those figures in the second column; and we have added a superscript "e" to distinguish the ten commercial publishers that have yearly averages that would even the collection in reference and science and technology, starring those figures in the first column.

APPENDIX B

UNIVERSITY PRESS	CUMULATIVE BOOK INDEX AVERAGE	"OUTSTANDING ACADEMIC BOOK" AVERAGE	"OXBRIDGE" INDEX
Cambridge Univ. Press	575.8	24.5	1.09
Columbia Univ. Press	102.8	6.4	1.59
Cornell Univ. Press	82.7	8.2	2.53
Duke Univ. Press	37.5	1.4	0.95
Harvard Univ. Press	92.7	15.6	4.30
Indiana Univ. Press	87.3	7.2	2.11
Johns Hopkins Univ. Press	102.5	6.5	1.62
Louisiana State Univ. Press	10.0	2.6	6.65
MIT Press	132.7	6.5	1.25
New York Univ. Press	50.2	2.1	1.07
Ohio State Univ. Press	15.2	1.1	1.85
Oxford Univ. Press/ Clarendon Press	830.3	30.5	0.94
Pennsylvania State Univ. Press	3.3	1.5	11.62
Princeton Univ. Press	138.3	16.8	3.11
Rutgers Univ. Press	33.0	2.0	1.55
Southern Ill. Univ. Press	47.8	1.8	0.96
Stanford Univ. Press	33.0	2.0	1.55
State Univ. of N.Y. Press	19.2	2.1	2.80
Syracuse Univ. Press	27.8	1.3	1.20

Temple Univ. Press	23.2	2.4	2.64
Univ. of Ala. Press	30.8	1.3	1.08
Univ. of Ariz. Press	32.2	1.2	0.95
Univ. of Calif. Press	187.7	15.9	2.17
Univ. of Chicago Press	152.2	13.2	2.22
Univ. of Del. Press	14.7	0.9	1.57
Univ. of Ga. Press	26.3	2.4	2.33
Univ. of Hawaii Press	24.8	0.9	0.93
Univ. of Ill. Press	58.7	4.8	2.09
Univ. of Mass. Press	28.5	1.6	1.44
Univ. of Mich. Press	23.5	1.3	1.41
Univ. of Minn. Press	37.7	2.5	1.70
Univ. of N.C. Press	48.2	4.8	2.55
Univ. of N.M. Press	25.5	1.5	1.50
Univ. of Neb. Press	14.5	1.5	2.64
Univ. of Notre Dame Press	28.2	1.2	1.09
Univ. of Okla. Press	50.3	1.4	0.71
Univ. of Pa. Press	27.3	1.8	1.69
Univ. of Pittsburgh Press	22.5	1.6	1.82
Univ. of Tenn. Press	24.7	1.9	1.97
Univ. of Tex. Press	7.7	3.3	10.96
Univ. of Toronto Press	29.0	3.7	3.26
Univ. of Wash. Press	39.2	1.2	0.78
Univ. of Wis. Press	7.5	2.8	9.54
Univ. Press of Kan.	13.2	1.3	2.52
Univ. Press of Ky.	31.8	1.0	0.80
Wesleyan Univ. Press	18.5	1.3	1.80
Yale Univ. Press	138.7	12.7	2.34

The Catalog Librarian—Change or Status Quo? Results of a Survey of Academic Libraries

Patricia A. Eskoz

This paper presents results from two surveys of catalog departments in academic libraries throughout the United States: the first by written questionnaire in 1983–84, with responses from 106 catalog department heads; the second by telephone interviews in 1986–87 with forty of the original respondents. Topics examined include analysis of the most common departmental organizational patterns, the extent to which the role of the professional is managerial, and the level of cataloging considered the responsibility of professionals and that which is delegated to support staff. Changes in the traditional role for professional catalogers are occurring slowly. A recommendation is offered for increasing involvement of paraprofessionals in higher-level cataloging. There is recognition of the continuing need for the professional catalog librarian's responsibility in the creation and maintenance of meaningful bibliographic records.

The role of the catalog librarian in today's academic library has been the subject of an ongoing research project begun in 1983. This paper presents results from two surveys, one a questionnaire survey undertaken in 1983–84, the second a series of follow-up interviews with catalog department heads done in 1986–87. The study includes analysis of the most common types of catalog department organizational patterns, the extent to which the role of the professional has become increasingly managerial, and the basic cataloging tasks that are performed by professionals and those that have been delegated to support staff.

METHODOLOGY

Questionnaires were sent to catalog department heads in approximately 160 academic libraries throughout the United States in 1983–84. All libraries contacted served institutions that offered at least a bachelor's degree and had student enrollments of 5,000 or more. In selecting the participants, every effort was made to achieve regional balance and a varied range of campus sizes and types; the survey encompassed public and private institutions and residential and urban commuter campuses.¹ Viable responses were received from 106 department heads, representing forty-six

states and Washington, D.C. Table 1 shows the regional distribution and size of institution represented.

In order to update the research during 1986-87, follow-up telephone interviews were conducted with forty of the original respondents. Two representatives were selected from each size and regional category shown in Table 1, e.g., two from the eastern group serving institutions with student enrollments over 30,000, etc. Again, the attempt was made to have as varied a representation as possible.

The original questionnaire was quite lengthy, and the research project involved a number of widely varied issues beyond the scope of this paper. In the telephone interviews topics were narrowed to a few pertinent questions involving departmental organization structure, current job descriptions for catalogers, and the role that is expected of the catalog librarian. Department heads were asked about changes that had occurred since the 1983-84 survey.

THE CHANGING LIBRARY SCENE: SOME OVERALL STATISTICS

The 1983-84 questionnaire was designed to obtain statistics on overall library staff size, the relative size of catalog departments by comparison, and the ratio of professional to support staff. Some of these results have been presented in other papers by the author.

Table 2 gives statistics for catalog department size among the forty par-

TABLE 1
PARTICIPANTS IN 1983-84 SURVEY OF ACADEMIC
CATALOG DEPARTMENTS GROUPED BY GEOGRAPHIC
AREA AND SIZE OF INSTITUTION SERVED

Group size	East	South	Midwest	West	Unknown*	Total
30,000 or over	3	2	3	2	1	11
20,000-29,999	4	8	6	7		25
15,000-19,999	4	8	8	5		25
10,000-14,000	7	5	7	6		25
Under 10,000	7	5	4	4		20
Total	25	28	28	24	1	106

*No postmark on return envelope.

TABLE 2
CATALOG DEPARTMENT SIZE IN
FORTY ACADEMIC LIBRARIES, 1986-87
GROUPED BY ENROLLMENTS OF INSTITUTIONS SERVED

Group	Largest		Smallest		Average	
	Prof.	Sup.	Prof.	Sup.	Prof.	Sup.
30,000 and over	26	60	5	5.5	12.6	31.7
20,000-29,999	18	26	1	4	8.2	17.1
15,000-19,999	6.5	17	3	6	4.5	10
10,000-14,999	25	65	3	5	8	16.4
Under 10,000	20	16	1	2	5	7.7

ticipants of the updated survey. Libraries are grouped by size of parent institutions. Eight libraries are represented in each institution size category described on the left. The figures in the first column to the right of each description show the size of the largest cataloging staff represented in that category, the center column figures show the size of smallest staff in that category, and the figures in the far right column show the *average* size of all the departments in that category. In each set of figures, staffs are divided into "professional" and "support" personnel. The figures for professional and support under "largest" (staff) and "smallest" (staff) in each category do not always represent the same library. For example, the statistics for the "smallest" staff size in the "under 10,000" category are composite statistics, representing two separate institutions. The department with only one professional cataloger actually has six support persons, while the library with only two cataloging support staff members has 2.5 professional catalog librarians.

The size of cataloging staffs has only a limited relationship to the size of student body served. The institutions whose statistics represent the "largest" staff sizes in the two smallest campus size groups serve universities that would popularly be called "prestigious" and support large materials collections. This can be contrasted with the departments having very small staffs, which usually represent public, tax-supported institutions. The smallest staff size encountered in the entire survey, representing an institution serving more than 20,000 students, consists of one professional cataloger and four support staff members—surely an inadequate size by any standards.

One issue investigated in the 1983–84 questionnaire was that of catalog staff size changes that had occurred after libraries joined automated cataloging networks. A paper presented in 1984 discussed this issue at length.² Results of the 1983–84 survey showed that during the preceding five years there had been a slight overall decrease in the number of professional librarians employed (about 3 percent or an average of 1/5 per department) while there was a very small overall *increase* in the average number of support personnel. Among participants of the 1986–87 survey, there has been a remarkable stability of staff sizes since 1983–84, both among professional and support staffs. Only one department reported a significant reduction (staff was cut by approximately 50 percent), which occurred late in 1983. Among the other thirty-nine, the maximum staffing change in any one department (increase or decrease) has been two positions, and the overall average department size is the same as in 1983–84.

This stabilization has occurred in spite of the almost universal acceptance of automation as a primary cataloging and catalog access tool. All of the 106 libraries are members of automated cataloging networks (the only library not a member in the 1983–84 survey has since joined a network). Development of in-house automated public access catalogs has proceeded more slowly but is gradually becoming the norm. In the 1983–84 survey only twelve libraries (about 12 percent) of 106 represented had automated catalogs fully operational. Among the forty participants of the 1986–87 update, six (15 percent) had automated catalogs at the time of the first survey; during the intervening years eleven more had installed such systems,

making a total of seventeen (42.5 percent) with fully installed automated public access catalogs. Most of the other libraries are in various stages of planning for automated online catalogs.

ORGANIZATION AND REORGANIZATION: STRUCTURES OF CATALOG DEPARTMENTS

A study of the current role of the catalog librarian begins with a picture of the setting in which this position functions. The telephone interviews made it possible to gather more details about departmental structure than could be obtained by questionnaires. Several general patterns are outlined below, ranging from the simple to the complex. Placement is somewhat arbitrary; each organization has unique and often intangible variations in job assignments and work flow that cannot be pinpointed by organizational charts.

1. Catalog departments operating as one large division. Twelve of the forty departments have relatively simple organizations with minimal internal subdivisions. Eight of these represent libraries serving less than 15,000 students; only one represents a student body larger than 30,000. Staff sizes range from one to seven professionals and two to ten support positions.

The smaller libraries may have no formal "catalog department"; cataloging may simply be a part of "technical services," which in itself is a very small operation. Two technical services departments have only one professional catalog librarian on the staff. These librarians also function as "head of cataloging" and supervise the support staff.

Organizations with more than one catalog librarian often designate one professional as a functional "head of cataloging," or "head cataloger." This person may be in charge of administrative supervisory responsibilities for the entire cataloging staff. Or s/he may function as a "cataloging coordinator" or "principal cataloger," being the person responsible for cataloging decisions, while for administrative matters all cataloging personnel report to the head of technical services (or even to the library director or assistant director). Larger departments usually have some internal hierarchy and some unit specialization. The larger the operation, the more the single-division organization begins to resemble the more complex patterns described below.

2. Catalog functions split into two basic sections: original/copy cataloging. Ten participating catalog departments are divided into two basic sections, one made up primarily of professional librarians, the other of support staff. Most of these follow an organizational pattern gaining favor since the advent of national cataloging networks: that of a definitive functional split between original or high-level modified cataloging and so-called copy cataloging.

The definition of what is considered copy cataloging varies slightly among catalog departments. It usually denotes bibliographic records in national networks such as OCLC that can be accepted with little or no change. Some departments limit such records to those from Li-

brary of Congress MARC tapes; others include certain member-input records in this category.

At least twenty-four of the forty departments have a distinct copy cataloging group, but the majority of these are more properly grouped with the multiple-division patterns described in (3) below.

Of those with two basic divisions, the largest department reported a staff of twenty-six professionals and sixty support members, although the overall cataloging operation was described as partially decentralized (some subject specialties were handled outside the cataloging department), and the above staff statistics apparently represent all library positions involved in some aspect of cataloging. The smallest department with a formal copy cataloging section reported a staff of four professionals and five support persons.

3. Departments with multiple formal subdivisions. At least sixteen (40 percent) of the departments have more complex structures than those described above. Complexity is not necessarily limited to larger organizations; staff sizes in this category range from three to twenty-five professionals and from five to sixty-five support positions.

Further subdivision beyond the original/copy cataloging split may contain more than one formally organized support staff group, more than one formally organized professional group, or be a combination of both.

Departments with large groups of support staff may subdivide personnel into several sections, with the copy-cataloging group being but one specialized aspect of catalog-related functions. Other support units frequently reported are materials preparation/processing, database management (usually responsible for online authority control), catalog maintenance (commonly found in libraries still filing catalog cards), and retrospective conversion (among those preparing for automated public access catalogs).

Departments with several professional catalogers may be formally divided either by subject specialties, cataloging by format, or a combination of both. These specialty units, or "clusters," sometimes include one or more support staff members in the group who may do some high-level modified cataloging or even original cataloging under supervision.

The cluster pattern seems to be a less popular method of organization than formerly, although at least six departments use it in some form. A modified form of this pattern may also be used by departments formally organized into only two basic original/copy cataloging divisions described in (2) above. A respondent said of such an original cataloging section: "We are basically one unit although there are subsections based on cataloging specialties," adding that some support staff were also assigned to each subsection.

One department head contacted in the 1986-87 telephone survey was involved in inaugurating a total library reorganization plan that does not fit into any of the above patterns. Professional librarians will no longer specialize by function; instead, they will become "subject bibliographers" responsible for all aspects of professional librarianship: reference, collec-

tion development, bibliographic instruction, and cataloging. This is similar to the organization advocated by Michael Gorman and implemented by the University of Illinois at Urbana-Champaign.³

Regardless of the present structure of catalog departments, reorganization and experimentation with new procedures are ongoing. About two-thirds of the 1983-84 questionnaire respondents indicated that some reorganization within their departments has either occurred during the two years preceding the survey or else was being planned for the near future.

Among the forty 1986-87 participants, over one-third (fourteen) reported some major changes in their organization since the earlier survey. Eight reported moderate changes, usually involving some change of responsibilities. Six said that there had been no changes since the 1983-84 survey, but changes were being considered. Three reported librarywide changes that did not particularly affect the catalog department. Nine said that there had been no changes at all or those that were too minor to cite.

One interviewee summarized it succinctly: "Things continually shift." The wide variations of such shifting can be epitomized by two examples. One administrator stated that several cataloging sections have merged. Another reported that what was formerly one large department has been separated into four units.

MANAGERIAL RESPONSIBILITIES— YES OR NO, THEN AND NOW

Within the various patterns of departmental organization, have the administrative, managerial, and supervisory functions of the catalog librarian increased while the actual process of *cataloging* is delegated to support staff? The author touched upon this question briefly on another paper in which she quoted Oyler who in 1980 foresaw such a role.^{4,5} The author's own surveys found only a modest increase in such responsibilities. The majority of department heads indicated that some of their professional staff have some supervisory responsibilities. To the written question, Do catalogers (other than department head) supervise staff directly? 47 percent replied yes, 28 percent reported some limited supervisory duties, while 25 percent reported none.

Department heads interviewed by telephone were asked about present supervisory/managerial assignments and any changes that had occurred since 1983-84. Personal interviews allowed more precise explanations of departmental management and revealed that, when feasible, this method of gathering information may be more effective than written questionnaires. Several department heads who had replied on paper that their professional staff did supervise clarified verbally that what is really involved is not true administrative responsibility but rather that of acting as a "resource person" and assisting with staff training.

Forty department heads defined the present supervisory role of their professional subordinates in this way:

A major role:	18	45%
A limited role:	10	25%
No supervision:	10	25%
No other professional on cataloging staff:	2	5%

By way of explanation, in few departments do *all* catalogers supervise. Those listed in the "limited" category include departments in which only one or two professional assistants are entrusted with administrative responsibilities.

The complexity of the catalog department organization has a direct bearing upon the extent of catalogers' supervisory responsibilities. Among the twelve catalog departments operating as one division, only one reported extensive formal supervisory responsibilities for the professional staff. Two other department heads have a professional assistant and/or "principal cataloger" with a supervisory role. Three of the departments each have a high-level *paraprofessional* assistant supervising the support staff.

Catalog departments formally split into two or more sections provide more opportunities for formal supervision. The majority of copy-cataloging support sections have a professional supervisor. Of the twenty-four with such a distinct group, fifteen specified that this unit is headed by a librarian. Another in the process of filling a professional cataloging vacancy is adding this supervisory responsibility to the job description. One department head reported that she, herself, as head cataloger supervises the copy cataloging unit. Four specified that this support group is supervised by a nonprofessional reporting directly to the head of cataloging. In three cases the exact reporting structure of the copy cataloging group cannot be determined from the interview.

Departments with multiple subdivisions usually have some professional catalogers involved in some formal supervision. The "cluster" or specialty unit described in the preceding section is usually headed by a professional cataloger. Support staff units other than copy cataloging may or may not provide additional supervisory responsibilities to professional catalogers. Complete statistics for these units are not available, but roughly about half of them are headed by a professional librarian while in the others the immediate supervisory responsibilities are delegated to a high-level paraprofessional.

Has the supervisory role of the professional cataloger *increased* or has this limited supervisory role been the norm for most of this decade? Questionnaire respondents in 1983-84 were asked whether catalog librarians had more supervisory responsibilities at that time than they had five years preceding the survey. While approximately one-third replied that supervisory responsibilities had increased, slightly over one-half said they had not. The remainder reported only slight increases or were uncertain.

Information gathered from the forty telephone interviews again provided a more definitive assessment of the extent to which changes have occurred. Eighteen departments did report a "major" supervisory role for catalog librarians, but for eleven of those there had been little change since 1983-84. (Six of those eleven, however, had added increasing responsibilities during the five years preceding the first survey.) For five departments, some supervision has been continuous for most of the decade, although supervisory duties have increased since 1983-84. One other respondent reported that while some catalogers still supervise, there has been a recent *decrease* of responsibilities—this as a result of moving from a "cluster" organizational pattern to a two-division original-copy catalog-

ing split. Only one respondent reported a recent major supervisory role created for catalogers where none previously existed: reorganization brought about the formation of professional and support departmental units, each of which is supervised by a professional cataloger.

Limited supervisory roles were reported by ten departments. In seven cases there has been little change since 1983-84. Three have added some supervisory responsibilities: (1) catalog librarians now supervise student assistants; (2) a professional heads a recently formed copy cataloging group of support staff; (3) one head of a small department, who formerly supervised eleven people, both professional and support, said that the addition of a professional assistant who supervises monographic cataloging has had a significant positive effect upon the efficiency of their operation.

No supervisory responsibilities exist for professional subordinates in ten departments, not including the two organizations in which the department head is the only professional cataloger on the staff. Nine of these ten had no supervisory duties at the time of either survey. In one case previous supervisory duties have been removed: the library that reorganized completely around units of subject bibliographers. Each unit is headed by a professional librarian, but at the time of the interview no catalog librarians had been selected to head the units.

To summarize overall supervisory changes reported among the forty participants of both surveys during a time frame of nearly a decade, sixteen departments (40 percent) had increased supervisory/managerial responsibilities, two (5 percent) had decreased responsibilities (in one case eliminated them), eighteen (45 percent) reported little or no change, and four others (10 percent) did not provide supervisory information on the earlier questionnaire but reported no changes since 1983-84.

Not all catalog department heads believe that the future role of the rank-and-file catalog librarian should be managerial. One administrator, when asked if his professionals are involved in supervision, replied: "No, we're careful about that." His feeling is that supervisory activities are disruptive and that librarians should concentrate on "professional" activities.

Another interviewee, when asked if there is a trend for catalogers to assume managerial positions, replied: "No—there is still a home in the library for regular catalogers."

Department heads frequently refer to professional catalog librarians as "resource persons." They are often involved in training support staff and consulted for special problems. One administrator described his professional staff in this way: "We don't supervise—we coordinate, we work together." In his department both librarians and support staff cooperate in goal-setting and establishing priorities.

The author's conclusion is that managerial changes are being considered frequently and occurring slowly. Automation itself does not seem to be the major contributing factor. The heavy use of existing catalog records in automated networks may actually simplify the delegation of supervisory responsibilities to paraprofessionals. The libraries that have effectively used catalog librarians in supervisory roles likely will continue to do so. Those that have not may slowly add these duties, or they may redefine the professionals' role in another direction: that of research or more indirect "managerial" aspects such as planning and training.

BIBLIOGRAPHIC RECORDS— WHOSE RESPONSIBILITY?

If the present role of the professional catalog librarian is partially but not completely managerial, is the cataloger's primary role that of creating bibliographic records? For many, this is true. If so, what aspects of formal cataloging belong to the professional catalog librarian and what aspects are being delegated to other staff members?

Table 3 shows several primary cataloging responsibilities accomplished by professional and/or support staff among the forty participants of both surveys. Comparison is made between the responsibilities assigned in 1983-84 and those in 1986-87.

Among these survey participants there has been a modest trend toward involving paraprofessional staff in higher levels of cataloging. Original cataloging was the sole domain of professional catalogers among 65 percent of the 1983-84 respondents, while 30 percent used both professional and support staff. In 1986-87, the figures are 60 percent and 35 percent, respectively, a shift of 5 percent. Twice as many departments made adjustments in assignments of adaptive and copy cataloging to involve more responsibility at the paraprofessional level.

These statistics invite comparison with a similar survey of staff level/cataloging level done by Braden et al. in 1977.⁶ Braden's study involved 147 academic libraries that were members of OCLC. Participants were divided into large and small libraries based on collection size. Methodology and cataloging level definitions are somewhat different, so a precise comparison cannot be made. Overall results do suggest a gradual trend toward involving support staff in higher levels of cataloging.

TABLE 3
CATALOG DEPARTMENT JOB ASSIGNMENTS
IN FORTY ACADEMIC LIBRARIES

Survey Date	Prof. Only		Both		Support Only	
	No.	%	No.	%	No.	%
<i>Original Descriptive Cataloging</i>						
1983-84	26	65.0	12	30.0	2	5.0
1986-87	24	60.0	14	35.0	2	5.0
<i>Assigning Call Numbers</i>						
1983-84	27	67.5	13	32.5	0	0.0
1986-87	26	65.0	14	35.0	0	0.0
<i>Assigning Subject Headings</i>						
1983-84	29	72.5	11	27.5	0	0.0
1986-87	26	65.0	14	35.0	0	0.0
<i>Adapting Member Input Cataloging</i>						
1983-84	8	20.0	26	65.0	6	15.0
1986-87	4	10.0	30	75.0	6	15.0
<i>Copy Cataloging</i>						
1983-84	1	2.5	12	30.0	27	67.5
1986-87	0	0.0	9	22.5	31	77.5

Braden's survey also found that strictly "original cataloging" has been primarily a professional assignment. Upon first observation the 1977 survey group might appear more innovative than those represented in the later surveys: in 1977 between 56.6 and 59 percent of catalog departments used professional catalogers only for what is described as "cataloging without copy," compared with 60 to 65 percent for the later surveys. However, Braden's 1977 survey included a cataloging level not used in this author's queries: "professional plus support staff for verification." If statistics for this category are combined with "professional catalogers only," between 83 and 88 percent of the 1977 participants relied mainly on professional catalogers for creating original records.

Among participants involving both professional and support staff for original descriptive cataloging (or copy without cataloging) Braden's 1977 survey shows between 12 and 15 percent; the 1983-84 and 1986-87 surveys show 30 and 35 percent, respectively. All three surveys show that only a very small percentage of libraries have relied solely on support staff for creating completely original records—Braden's survey had none, while two departments in the author's surveys reported that support staff do all original descriptive cataloging.

Adaptive cataloging, or that of modifying bibliographic records to conform with local practice, is more often delegated to support staff under supervision, with only problem material being referred to catalog librarians. In Braden's survey, between 21 and 23 percent reported using professionals only. If this figure is combined with those departments using "professional plus support staff for verification" the figures are between 35 and 50 percent. Among 1983-84 survey participants, 20 percent of participants used professionals only for adaptive cataloging; in 1986-87 this practice was reduced to 10 percent.

The majority of departments involve both professionals and support staff at this level. Braden's 1977 study shows figures between 43 and 47 percent; among 1983-84 participants nearly two-thirds used both, and by 1986-87 three-fourths of the participants did so. Few have relied solely on support staff for all adaptive cataloging; interestingly, all three surveys, covering a ten-year span, show almost the same percentages throughout: 1977 reports 13 percent, while both the later surveys show 15 percent—this in spite of the near-universal agreement that the quality of cataloging in cooperative online networks has improved over the past decade.

As expected, most catalog departments give the major responsibility of copy cataloging—those records that can be accepted with little, if any, modification—to support staff. At this level few of the participants in the author's studies use professionals only; the majority use support staff only, under supervision. Braden's study is difficult to compare, since it breaks down certain types of Library of Congress records (same edition, different edition, cataloging-in-publication). Lumping these categories together, in 1977 from 28 to 62 percent used both professional and support, a nearly equal number used support staff only, and 10 percent or less used professionals only. In the author's survey, one library used professional catalogers only in 1983-84; in the latter survey none did. Meanwhile, the shift in responsibility toward using support staff only rose from 67.5 percent in

1983-84 to 77.5 percent in 1986-87, a 10 percent differential.

Those department heads who do involve paraprofessionals at levels beyond "copy cataloging" said that the quality and quantity of such work under supervision is steadily improving. Among the telephone interviewees, very few reversals were reported: departments previously making use of paraprofessionals for more advanced cataloging have continued to use personnel in this way.

Two cataloging components were treated separately in the author's surveys: assigning call numbers and subject headings. The 1983-84 survey results showed that the responsibility for assigning subject headings was the least frequent aspect of cataloging delegated to paraprofessionals; nearly three-fourths of departments relied solely on professionals; among 1986-87 participants two-thirds did. This may be a wise use of professional expertise; according to a recent study by Matthews, library patrons' major approach to the catalog is by subject, and it recommends that the number of subject headings per record be increased.⁷

Paraprofessional involvement in high-level cataloging seems to be a more common practice in larger staff organizations. (For research purposes, the author computed statistics using a five-way grouping according to institution size, but for clarity and brevity only a summary of overall statistics is presented here.) One might expect the reverse to be true, with smaller departments forced to use whatever personnel is available. Instead, it may be that larger operations are better equipped to make use of staff training programs. This factor plus the very presence of a larger volume of material may make it not only practical but necessary to delegate responsibility.

One more recent study is worth noting. This is a survey published in 1987 by the Association of Research Libraries, Office of Management Studies, which analyzes the copy cataloging sections of fifteen participants.⁸ Thirteen respondents answered the question, Is any original cataloging done in the copy cataloging section? Eight replied yes: two said that this original cataloging is done by professionals only, three said it is done by paraprofessionals only, and three involve both. Whereas alone this cannot be considered a representative sampling even for copy cataloging units, a comparison with other studies would indicate a definite if gradual trend toward involving paraprofessionals in higher levels of cataloging.

CONCLUSIONS AND RECOMMENDATIONS

A one-word summary for this study might be "evolution." Changes are occurring in the role of the catalog librarian, but slowly. The library professionals who advocate innovation may well be disappointed with this conclusion. In spite of varying organizational patterns and constant reorganization, catalog departments are still recognizable as catalog departments and catalogers are still recognizable as catalogers. The tools and resources have changed, but the jobs and basic skills still have much in common with professionals of another generation.

Yet for those who would promote change, it is this author's opinion that there is reason for cautious optimism. Revolution has not occurred within the catalog department, for which traditionalists will be grateful. Profes-

sionals and their staffs have adopted and adapted to new technologies much more easily and painlessly than once was predicted, and largely within the traditional library organization.

When this research was begun in 1983 there was still widespread belief among the author's colleagues that the market for catalogers was declining. The results of the 1983-84 survey showed a much smaller position decrease than had been expected, and overall staffing now appears to be generally stable. Indeed, some library authorities are reporting a shortage of qualified catalogers.⁹ Although one cannot call cataloging a "growth industry," there is still need, even demand, for catalog librarians.

It is this author's belief that professional catalog librarians still spend too much time in routine cataloging that could be delegated to well-trained, high-level paraprofessionals *under supervision*. Although a certain job possessiveness may still exist among professionals, this is not the major obstacle to delegation of greater responsibility to support staff. If department heads could voice one single complaint, it might well be that there simply are not enough support positions allotted to their departments to free professionals from routine tasks. Cataloging is not a mystic art and most of the skills required can be learned on the job. It does take dedication, experience, and consistency, and there must be careful training and supervision. Catalog departmental leaders simply must find ways to communicate those needs to their administrations.

Nonetheless, the major role of the professional catalog librarian will remain what is implied in that title: responsibility for the creation and maintenance of meaningful bibliographic records to meet the needs of the information seeker. While a library degree and appropriate experience do not guarantee a well-placed delimiter in a MARC record, a professional background should enable the catalog librarian to see the larger whole; to evaluate priorities; to make wise, long-range decisions; and to acknowledge the importance of sometimes tedious details of quality cataloging.

Statistics alone do not show the whole organizational picture. They provide a skeletal outline of reality. The flesh and blood of cataloging services is revealed in the vitality of those involved in the day-to-day operations of their departments. A dynamic leadership quality could be discerned among those personally interviewed, those who took time from their busy schedules to talk with the author. Almost without exception they expressed enthusiasm for their jobs, faith in their staff, and a readiness to meet the challenges that lie ahead.

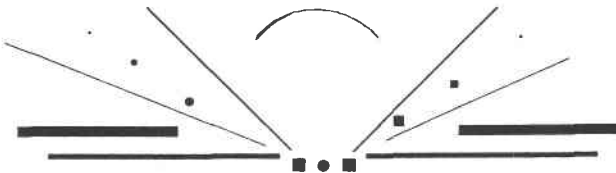
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The Indexes to AACR2 and Its 1988 Revision: An Evaluation

Bella Hass Weinberg

The indexes to the 1978 and 1988 editions of AACR2 are compared and evaluated. The format of the index follows the recommendations of the major standards, but the indexer's use of chain index structure and omission of concrete topics create difficulties for catalogers. The structure is explained and illustrated, and examples of missing entries and cross-references are provided. A list of recommended types of additions and changes to the index concludes the paper, with the goal of their adoption in the next edition of AACR.

In training and supervising catalogers in the use of AACR2 in the late 1970s, I observed that they had great difficulty in locating the answers to specific questions through its index. I annotated the index of my own copy but never formally reviewed the 1978 index. The publication of AACR2's 1988 Revision gives me the opportunity to compare and evaluate the indexes of the two editions.

FORMAT

The indexer, K. G. B. Bakewell, is president of the (British) Society of Indexers and, having played a major role in the development of the British standard on indexing,¹ is clearly knowledgeable regarding both the principles and style of book indexing. Members of indexing award juries would have difficulty finding formal flaws in either edition of the index to AACR2. Bakewell's indexes comply with the criteria for the H. W. Wilson Award for Excellence in Indexing, administered by the American Society of Indexers.² These criteria, in turn, conform to the American National Standard *Basic Criteria for Indexes*.³

Some of the noteworthy features of the format of the indexes to AACR2 are: (1) The typeface is clear and of generous size. (2) Subheadings are indented (as opposed to paragraphed), making the pinpointing of an aspect of a main heading easy. (3) There are continuation headings on verso (left-hand) pages when subheadings span two pages (although I favor the use of continuation headings on recto pages as well, and even at the top of the second column on each page). (4) The index features adequate typographic

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variation in that italics are used for *see also* references and other instructions to the user. (5) Punctuation is applied intelligently and consistently, e.g., semicolons separate terms to which a user is referred, and quotation marks are used to clarify certain headings, e.g., “**With**” notes. (6) Capitalization of main headings and lowercasing of subheadings (except for proper nouns) are also good choices.

Other formal features of the indexes warrant longer discussion. The introductory note to the index of the 1978 edition explicitly states that reference is to rule number rather than page. This sentence is lacking in the introduction to the 1988 index. Indexing standards call for a note explaining unusual locators, but this may be unnecessary in the case of AACR2 for two reasons: (1) it is obvious that a locator such as “21.16B” is not a page reference, and (2) rule number is featured as the headline on each page of the text. Rule number is more specific than page number in most cases, as few AACR2 rules span more than one page. Use of this type of locator also facilitated compilation of the index prior to the page proof stage.

One aspect of the filing sequence that merits comment is that prepositions and other “function words” at the beginning of subheadings are not ignored. Some indexing experts have strong opinions against this.⁴ I can accept the arguments for treating these words as significant in filing, but the choice of prepositions in AACR2’s index seems arbitrary in some cases. Two examples:

Square brackets, use of

- in description
- with uniform titles

Words or phrases

- in entry under initials
- with statements of responsibility

In both cases, “with” could have been replaced by “in.” In fact, in the latter case, the wording of the indexed rule (1.1F12) is “in the statement of responsibility.” For headings that have many subheadings, an injudicious choice of preposition may substantially lengthen search time.

A significant change in the filing sequence of the indexes to AACR2 is that in the 1988 Revision, *see also* references immediately follow main headings with lengthy arrays of subheadings, rather than being placed at the end of the entry, as they were in the 1978 edition.

This difference is not explained by the fact that the introduction to the first index cites *ALA Rules for Filing Catalog Cards* (1968) as an authority, while *ALA Filing Rules* (1980) is cited in the second. Both editions of ALA’s filing rules recommend placing *see also* references at the beginning of an entry. Most book indexing manuals and standards, in contrast, suggest placing such references at the end of entries. The rationale for this is that the printed page provides a panorama,⁵ and the typographic variation of *see also* references calls them to the user’s attention. In cases where complex entries span several columns or pages, however, this assumption is not warranted. Those who have worked with card catalogs know the advantages of telling a user right up front: there may be a more specific or related term for the topic you are seeking. The 1988 British standard on

indexing makes a similar point at rule 5.5.2.1, and Bakewell presumably realized the advantage of applying this principle in the revised index to AACR2.

INDEXABLE MATTER AND SYNDETIC STRUCTURE

Standards provide excellent guidance on the format of indexes but are of little use in helping an indexer decide what should and what should not be indexed. Bakewell clearly considered the categories of indexable matter in AACR2, and the introductory note to the indexes of both editions enumerates the categories that were excluded, e.g., "examples are not indexed." Bakewell made conscious choices in the area of indexable matter, but his omissions create difficulty for the novice cataloger.

The index uses the specialized terminology of AACR2. Most indexing manuals recommend that terms in the index match those in the text, but in many cases, Bakewell does not provide a reference from the popular term likely to be sought by the user of the code. A glaring omission from the index to the 1978 edition was a reference from *Subtitles* to *Other title information*. This has been rectified in the 1988 Revision, but was far more important during the transition from AACR1 to AACR2. A reference from *Defective copies* to *Imperfections* is lacking in the new edition as well. A cataloger not finding the former term in the index might be hard pressed to come up with the synonym.

Noncatalogers have even more difficulty with the index. In teaching indexing, I ask my students to prepare a bibliographic reference to a periodical article according to AACR2 (for the purpose of comparison with other standards). "Bibliographic reference" is clearly a useless term in the code; a search on "Periodicals" in the index leads us to **Serials**, none of the subheadings of which seem promising; **Articles** is a heading, but only in the sense of *a*, *an*, and *the*. Much as I dislike spoonfeeding, I must tell the students to search the index under **Analytics** to find a model of a reference to a periodical article in AACR2 format.

The index has a great many upward *see* references, i.e., references from concrete terms to the broad categories under which AACR2 subsumes them, e.g., **Counts** *see* **Titles of honour, nobility, address, etc.** There are also numerous *see also* references to superordinate terms in the form **Flip charts for other rules** *see* **Graphic materials**.

In certain cases, the *see* references are misleading. **Non-roman scripts** *see* **Romanization** suggests that the latter is to be employed whenever non-Roman scripts are encountered. AACR2 dictates otherwise, although the Library of Congress does not always follow its recommendations in this regard. AACR2's rule 1.7A3, which calls for the use of non-Roman scripts in notes, is unindexed, even under the slanted term **Romanization**.

The 1988 Revision has the useful cross-reference **Two or more . . . see Multiple**, but an incomplete array under the latter heading. There are entries for **Multiple places of publication** and **Multiple publishers**, but not for "Multiple terms of availability." The handling of the latter is illustrated in rule 3.8D1 (cartographic materials), which is unindexed under the general heading **Terms of availability**. There is an entry for **Two**

works issued together, uniform titles, but no reference to the rule for description of such publications (1.1G2 in the 1978 edition, 1.1G3 in the 1988 edition).

Many terms likely to be sought by a cataloger are missing from the index entirely, for example, *Limited editions*. The method of treating these is illustrated in rule 2.7B10 *Physical description*, a superordinate category that does not readily come to mind. The note on limited editions is technically an example in AACR2, which the indexer says are excluded, but how is the cataloger to know which bibliographic conditions merit separate rules and which are illustrated in notes?

The indexing of all examples in AACR2 would probably have doubled the size of the work, but selective indexing of examples would have been useful. In my experience, catalogers learn more from studying examples than they do from reading abstract rules. Furthermore, certain examples are particularly memorable. The 1978 edition of AACR2 allowed separate headings for authors with two or more bibliographic identities, but inexplicably called for a *see* reference from **Charles Lutwidge Dodgson** to **Lewis Carroll** (p.352). The 1988 Revision calls for the establishment of two headings for this author (p.384). Not only is this specific change missing from the index, but AACR2's technical term *Separate bibliographic identities* cannot be found under *S* or *B* either.

One of the major contributions of ISBD, which AACR2 incorporates, is the rigorous punctuation of the elements of bibliographic description. The colon, for example, determines the filing medium of the title proper. The index to AACR2, however, does not assist a cataloger in dealing with the problematic cases, e.g., where to place the colon in compound titles containing the word "and." Neither edition of the index has entries for either *Compound titles* or "and" in titles. This is a serious omission because two patterns of punctuation may be observed in the examples: semicolon before *and* in the case of two distinctive titles (rule 1.1G2—1978; rule 1.1G3—1988), and no punctuation when *and* precedes phrases like "other stories" (rule 2.1B1). These rules are also not accessible through the index entry **Two works issued together**, for which the only subheading is **uniform titles**.

AACR2 deals with the conflict between title page punctuation and ISBD punctuation, i.e., the replacement of symbols on title pages that have a specific function in bibliographic description. One would expect direct access to each of these characters through the index; however, it is missing the term "ellipsis," the handling of which is explained in rule 1.1B1. The rule gives the symbol only, but a sophisticated indexer should have provided the corresponding word. An index that provides an excellent model of the handling of punctuation and function words is the one compiled by Philip James for the third edition of *Words Into Type*.⁶ One can find the entry *and* in the index even if one does not know that it is a conjunction.

In several cases where the correct heading is located in the index to AACR2, important rule numbers are missing; the case of **Two works issued together** has been cited above. Another example: the heading **Publishers' numbers** lacks a reference to rule 1.7B19 in the general chapter, although it has the subheading **music**, referring to rule 5.7B19. The sym-

metry of the rule numbering structure of AACR2 confirms that the former locator is warranted. This symmetry provides important clues to an indexer and should have served as a check on the completeness of the index.

CHAIN INDEX STRUCTURE

The index complements rather than replicates the structure of the text. The user is referred to the general rule for the sought topic; specific aspects of the topic are not analyzed. For example, the heading **Title and statement of responsibility area** sends us to rule 1.1, and the index does not analyze the specific topics dealt with in the several pages on which this rule is elaborated. This practice is based on the principle of *chain indexing*, which Ranganathan developed for classified catalogs,⁷ but which J. Mills explained may also be applied to books.⁸ Chain indexing is economical of space but assumes that the index user understands the structure of the work as well as that of the index.

To illustrate: a reasonable question for a novice cataloger is "What if the title page has no named author?" A search of **Statements of responsibility** in the index to AACR2 (in itself a sophisticated step) reveals a lengthy array, but no subheading such as "lack of" or "missing." This is because the general rule for such statements is 1.1F—for which the index provides an entry—but the specific rule is in 1.1F2, a subclass of the former, and an entry for this would violate the principles of chain indexing. There is an apparent exception to the rule in the subheading:

Statements of responsibility 1.1F

— as part of title proper 1.1B2, 1.1F13

This is not a true exception to chain indexing procedure, however, as it would be misleading to index an aspect of a topic treated in a rule other than that for the main heading without indicating that that aspect is also discussed within the primary rule. This subtlety of chain indexing is surely unknown to most American catalogers. (British students of library science have more exposure to the interplay between classification and indexing.) Moreover, **Lack of title** is an omnibus reference (a *see* reference to multiple terms) in the index, instructing the user to search for the subheading "lack of" under such headings as **Title proper**. By analogy, a cataloger might reasonably search for "Statements of responsibility, lack of."

CONCLUSIONS AND RECOMMENDATIONS

AACR2 is a complex code to index. No human indexer, and certainly no computer, could think of all the common and technical terms that catalogers are likely to seek in its index. The index to the 1988 Revision is more generous with entry vocabulary (cross-references from synonyms) than the first; presumably catalogers have over the past decade pointed out missing terms to Mr. Bakewell.

The conscious omissions of the indexer and his choice of structure create difficulties for users of the code. Enhancing chain indexing through supplementary analysis of broad headings would surely "save the time of the user"—another one of Ranganathan's conceptual contributions to librarianship, and certainly a primary purpose of indexing.

In terms of length (48 out of 620 pages in the 1978 edition; 53 out of 677 pages in the 1988 edition), the standard guideline that an index should constitute about 5 percent of the text is exceeded, but it should be noted that the index features a larger typeface than is generally used for this section of a book, so the percentage may be smaller than it seems. It may be argued, moreover, that a "legal" code that has very little excess unindexable verbiage should have an index that approaches the code in length.

The index to *AACR2* would be enhanced by the following types of revisions, additions, and changes in its structure and format:

I. *Indexable Matter*

1. Review the code to ensure that all rules have been completely and consistently indexed, using the parallel numbering of related rules as a clue.
2. Review the illustrative notes for indexable cataloging concepts that might be perceived as bibliographic conditions.
3. Index examples selectively: include headings affected by a rule change, uniform titles for liturgical works, and distinctive headings whose superordinate category may be difficult to identify.

II. *Structure and References*

1. Include additional cross-references from current and superseded cataloging terminology, as well as corresponding terms from other branches of librarianship and the field of indexing.
2. Analyze headings that refer to lengthy rules, to allow the user to pinpoint a specific subrule through the index.

III. *Format*

1. Add continuation headings, where required, to recto pages and the second column on each page, to facilitate orientation of the index user.
2. Review subheadings beginning with prepositions. Consider filing on the keyword or try rewording the subheading so that the syntactic connection with the main heading comes at the end.

Brief lists of errata and addenda to indexes are sometimes published, but the above list of recommendations entails a complete review of the text and numerous additions to the index. It is not expected that such a project will be undertaken at this time. It is hoped, however, that the indexer of the next edition of *Anglo-American Cataloguing Rules* will consider some of these suggestions worthy of implementation and that the code's publishers will generously allot additional space to the index to enhance access to the text.

Until *AACR3* appears, catalogers are advised to annotate the index in their copies of *AACR2* to facilitate returning to a specific rule once it has been found by a multistep search.

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LRTS' Subsection

Shall We Throw Out the Technical Services—and Then What?

D. Kathryn Weintraub, Editor

In this, the final paper of our session, Liz Bishoff identifies the need, when introducing new technology, to undertake a systematic analysis of the work being done throughout the library. New tools can change not just the amount and kind of work done in different units but also the way in which different groups of staff relate to one another. She shows how, at Pasadena Public Library, such an analysis led to a different and more efficient organization of that library.

Job Analysis

Liz Bishoff

One of the anticipated results of automating library functions and services is that jobs will or have changed; thus libraries would be prepared to meet the changing information needs of users and, in some cases, "excess" staff could be eliminated. Many library directors have promised their city council, state legislature, or other funding source that positions would be eliminated. Few libraries have actually eliminated staff. In reality, automation has allowed libraries to contain staff or, more importantly, to redirect our human resources to direct patron services. Libraries are able to offer new programs, from online reference services, latchkey programs, and literacy programs to computer and basic reading and writing instruction. Increased circulation is handled without increased staff, more titles are cataloged with a shorter turnaround time, new material types and new languages can be cataloged, the time to acquire interlibrary loan mate-

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rials decreases, and in general, libraries are able to expand and enhance services.

The circulation system that the library purchased to handle patron registration files, reserve book room functions, notices, and billing, as well as circulation, now is providing reference staff with online catalog-type information and, in some instances, is serving as an online catalog for the user, replacing card catalogs, shelflists, and authority files. At the Pasadena and Glendale public libraries, the GEAC system that was purchased in 1981 in a bid to support sixty terminals for staff use in the circulation system is now supporting ninety-seven terminals, of which thirty-seven are public access terminals. On-order materials are entered in the system. The system serves as the library's shelflist and online catalog and is used for interlibrary loan between the Pasadena and Glendale libraries, as well as to generate a long list of unanticipated management reports. In addition, staff is continually identifying new uses for the system.

Implementing a program to accommodate these pending changes is seldom discussed. There are a few articles that detail how to ease staff into automation, how to determine what tasks will still have to be done in the automated library, and what will no longer be necessary. Ideally, allocation of manpower should be done in conjunction with the implementation of an automation project. Many libraries have undertaken significant planning and task analysis prior to implementation of OCLC or RLIN, reallocating and reassigning staff to the new tasks and eliminating tasks that are no longer necessary. As libraries move to projects that involve larger computer systems, more than one department, and more than one function, such as the acquisition and implementation of an automated circulation system or an integrated library system, librarians find they cannot anticipate all the staff changes.

Reality? Reality sets in eighteen to twenty-four months after the implementation of a major project. Staff begin asking, or at least they should be asking, Why are we doing a particular task? e.g., why are we producing a book label when we don't use a photographic circulation system? or why are we maintaining a list of periodicals when we can get a list as a by-product of the union listing project? Likewise, library management should be determining who is doing what tasks. Does the reference staff have to search the manual verification tools when the interlibrary loan clerk could search OCLC? Does it make sense for the selection staff or bibliographers to be attached to technical services merely because the ordering tools used to be located in that department? Isn't it better to have them working with the reference staff, faculty, and patrons, accessing the online reference tools that can aid in the development of collections?

Management needs to recognize that technological changes affect not only the tools we use but also our assumptions regarding human resources, staffing, and organization. Managers must question if "business as usual" is still appropriate. Does library management know which staff is doing what, who they are interacting with, and how they are using manual and automation tools? To determine this, a job analysis program can be undertaken. Job analysis is a common tool, used by all types of organizations to determine manpower allocation, and your personnel department can assist

with a job analysis or manpower assessment program.

Manpower planning involves the assessment of job requirements, conducted objectively and unemotionally, using information on job duties and responsibilities. Manpower planning has an impact on short- and long-range planning. Effective use of personnel affects the ability to ensure quality service. It is important when any organizational change is under way, including automation. Development of programs, additional services, or decreases in programs and services all impact staff. To allocate personnel adequately, it is important to know what tasks individual staff members perform and to ask (1) are the right numbers and kinds of people doing the things we need to have done? and (2) are we properly using people? A job analysis can be conducted by an outside consultant, by a staff committee with the assistance of the personnel department, or by the personnel department with assistance from staff. As with all change, staff involvement is critical for the success of the program.

There are three basic methods of job analysis—interviewing of individual staff members, observing the activities of staff members, and having individual staff members complete a questionnaire. Each method has its pros and cons, and the method selected will frequently be tied to the type of analysis done (consultant, personnel department, or library staff). Regardless of the method of analysis, it should include:

- A list of duties, with a brief explanation and percentage of time performed per week. An additional list can be compiled of duties done at larger intervals, such as on a quarterly or monthly basis.
- Identification of the most complex task performed and why the individual thinks this is the most complex task.
- Disagreeable working conditions. This can frequently include environmental conditions but, in the case of managers, can involve interpersonal relations, communications, etc.
- Tools, equipment necessary to perform job, including professional tools—*AACR2*, computer terminal, microcomputer, *LCSH*, etc.
- Supervision received and the kind of supervision—direct or general.
- Supervision given—who the individual supervises, including job title(s) for the supervisee(s).
- Who the individual interacts with and the percentages of time involved.

After the employee has completed the job analysis survey, the form should be reviewed with the employee's immediate supervisor. The review will serve two purposes: first, verification of tasks, equipment, etc., and second, the supervisor will see how individual employees define their jobs. Even if there is no reallocation of tasks, the job analysis can aid the supervisor in directing the employee.

Once the information is verified, the evaluator should look for some common threads, peculiarities, etc. For example, if the formal supervisor of the circulation staff is the adult services librarian, but the circulation staff spends 50 percent of their time discussing problems and issues with the technical services supervisor, you had better take a closer look at what they are discussing and why. This thread has appeared in many libraries that have automated circulation functions. Job analysis may discover that

the circulation supervisor interacts with the head of technical services, who was responsible for the operation of the computer. The two discussed the entering of information, how to interpret a particular report, and how to correct a patron record, as well as the use of various database maintenance projects. A clear pattern can develop showing that the circulation and interlibrary loan functions of the library were closely tied to the automated circulation system. While circulation may be a public service in name, more effective staff utilization called for it to be closely aligned with technical services.

A similar case can be made for the relocation of interlibrary loan from the reference department to circulation services. Once the taking of the request is completed, the initial verification, placing of the request with the lending library, and eventual delivery to the user can be assumed by the circulation department staff. With access to OCLC, the interlibrary loan staff can identify the item and its location, place the request, and deliver it. For those items that cannot be verified in the OCLC database, traditional verification tools must be consulted. As the OCLC database is large and includes print and nonprint materials, English and foreign-language materials, and new materials as well as older ones, the staff is likely to find a large number of their requests, returning to the reference staff for manual searching only those not found on OCLC. Of course this will vary from library to library, but the Pasadena Public Library was able to reduce turnaround time by five days simply by eliminating the need for the reference staff to verify every request.

Job analysis and its associated manpower planning can result in dramatic changes in a library's organization. The degree of reorganization will vary from library to library and job analysis is only one element in the process. However, it can identify many important issues relating to the staff and the work they perform. A new pattern of library organization is developing as a result of automation. In 1980, the Pasadena Public Library underwent a major reorganization, which resulted in the establishing of three divisions: reference, public service, and support services (figure 1). In this case, the reorganization preceded the automation activities. However, the library was in the process of planning for the automation of circulation functions. Figure 1 demonstrates the type of organization possible in an automated library, placing circulation, technical services and automated services in one division. This type of reorganization is not peculiar to Pasadena. The University of Illinois-Chicago has reorganized along similar lines, with one division for bibliographic and access services and one for public and reference services. Other patterns are developing, all recognizing the changing patterns of information delivery.

Many libraries are moving from an online circulation system to integrated library systems. If the circulation department is responsible for the computer, will they be able to respond to the needs of a system that now serves an online catalog and acquisition system? Is it necessary for the library to reorganize once again, creating a new department with responsibility for systemwide automation? There is no one perfect model; each library needs to develop a manpower plan that meets its specific needs, and a systematic analysis of jobs is one tool that enables managers to make such decisions.

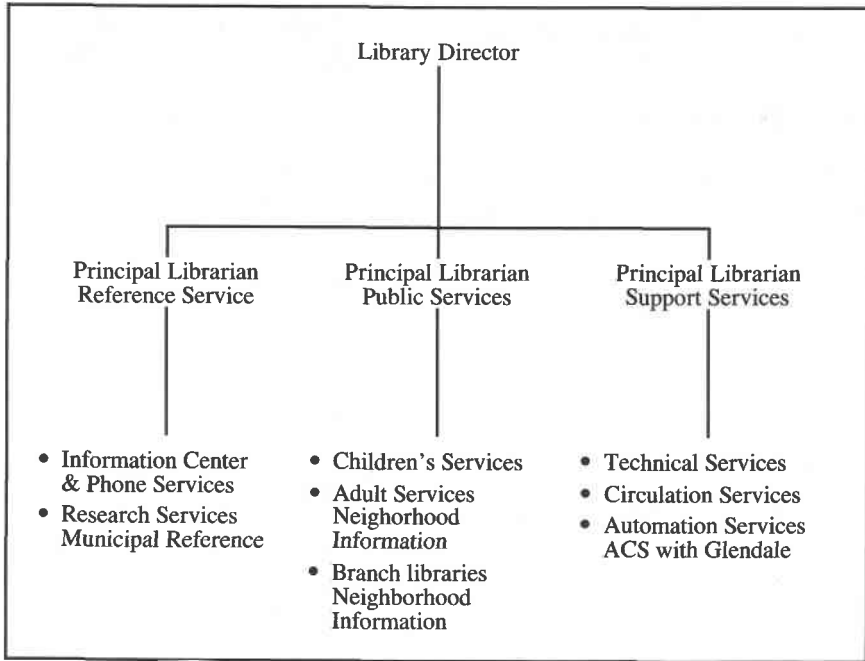


Figure 1. Pasadena Public Library Reorganization



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Book Reviews

Richard D. Johnson, Editor

<i>Acquisitions Management and Collection Development in Libraries</i>	408
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Cataloging Books: A Workbook of Examples. By William E. Studwell and David V. Loertscher. Englewood, Colo.: Libraries Unlimited, 1989. 201p. paper, \$14 U.S.; \$17 elsewhere (ISBN 0-87287-641-1). Two answer diskettes, \$28.50.

A wonderful tool for teachers and trainers of cataloging students, this workbook contains 100 examples of monograph title pages with accompanying cataloging questions and MARC tag workforms. Each example contains a title page along with information from the verso and any other information the cataloger needs to complete a full cataloging record.

The right-hand page of each example contains what the authors call "focus problems," which cover cataloging description, choice of main and added entries, subject heading assignment, and both Dewey Decimal and Library of Congress classifications. Students may write their answers, completed by consulting AACR2R, DDC editions 19 and 20, LCC, LCSH, or Sears 13, in the space provided.

The right-hand page also contains the relevant MARC tags for each record. These MARC tagging workforms contain only variable fields, not fixed fields. While the lack of fixed fields probably would not be a disadvantage for cataloging students in library school, it could be a disadvantage in the training of new catalogers in the field since practicing catalogers must be knowledgeable about the fixed as well as the variable fields.

The flexibility of this workbook is enhanced for the instructor by the fact that the publisher offers a complete set of answers on computer disk. The answer disks, sold separately from the workbook, are available for IBM, Apple II, and Macintosh computers. The authors have arranged the answers in almost every conceivable manner, allowing the instructor great flexibility in preparing full or partial sets of answers or, because the disks are used in conjunction with a commercial computer program such as WordPerfect, in updating the answers to reflect current cataloging changes.

I think cataloging instructors and trainers will find this workbook very useful in teaching cataloging of books and the MARC book format. I hope that the authors will in the future compile a similar workbook for cataloging nonbook materials.—*Beth Jacoby, University of Delaware, Newark.*

Acquisitions Management and Collection Development in Libraries. 2d ed. By Rose Mary Magrill and John Corbin. Chicago: American Library Assn., 1989. 285p. \$27.50 (ISBN 0-8389-0513-7). LC 89-6784.

Collection development, as a concept, a conscious process, and a systematic library activity separate from acquisitions, has attracted attention in the literature only recently. It is, as the authors of this work point out, "one of the most discussed but least understood areas of librarianship." This book, the second edition of a 1984 ALA publication, goes far toward explaining the fundamentals of collection development and its interrelationship with acquisitions work while also providing an overview of the management of library acquisitions programs in public, academic, and special libraries.

The book's organization is straightforward, following exactly that of the first edition. Three chapters on collection development, including an overview of issues and a discussion of internal and external influences, policies, and the organization of collection development work, are followed by eight on acquisitions procedures, including bibliographic searching, vendor plans, out-of-print ordering, nonbook materials, serials, special acquisitions, and gifts and exchanges, among many other topics. Evaluation of the collection, an important measure of successful collection development and acquisitions programs, is the subject of the final chapter.

A lengthy, very current bibliography, subdivided by topic, follows each chapter. This feature, very useful for those pursuing further reading on a given subject (e.g., training for collec-

tion development, the automation of acquisitions work, acquiring audiovisual materials, problems of foreign acquisitions, the electronic delivery of information, and various methodologies for collection assessment, etc.), makes this work an effective textbook. The bibliographies, which together constitute several hundred entries, would, however, be more easily used were they combined at the end of the book.

The principal strength of this work is that it is a comprehensive orientation to collection development and acquisitions work. We have here, in one volume, a guide to procedures and work flow, an objective consideration of the advantages and disadvantages of different approaches not just to acquisitions methods but also to collection evaluation and many other important aspects of our work, and a basic reference source on issues facing collection building in all types of libraries. The second edition has been updated to consider the impact of automation on acquisitions procedures and the changes in collection development brought about by electronic sources and new means of access to information. Although the elusive question of the nature of the bibliographer's work, that is, what specifically a collection builder does, is not explicitly treated here, the context is established and the bibliographies offer many leads to those who might consider collection development work as a career.

In conclusion, Magrill and Corbin have given us a well-researched and clearly written work that integrates fundamental information on acquisitions and collection development in various library settings with discussion of the newest challenges facing us. It will be used as a text for students, as a handbook for new members of the profession, and as a reference tool for more seasoned librarians.—*Deborah Jakubs, Duke University, Durham, North Carolina.*

Automated Authority Control in ARL

Libraries. By Stefanie A. Wittenbach. SPEC Kit #156, July/August 1989. Washington, D.C.: Association of Research Libraries, Office of Management Services, 1989. 113p. paper, \$20 (ISSN 0160-3582).

By now we have accepted that authority control is much more critical for retrieval of records in an online catalog than it ever was in the card catalog. Yet of the thirty libraries responding to Wittenbach's survey of thirty-two ARL libraries, only seventeen have authority control and only four of these have an authorities management department. Obviously, automated authority control is lagging well behind the introduction of the automated catalog.

This SPEC Kit will be most useful to those libraries just initiating the position of an authority control librarian and/or catalog management unit. It consists of sample plans, procedures, organization charts, authority format work forms, system reports, and job description and performance standards for professional, paraprofessional, and clerical positions. While all of this is helpful, also included are local acronyms, procedures, and conditions; references to unaccompanying documentation; and nonrelevant minutes of committee meetings. In several places the legibility is poor due to photocopying of dot-matrix text. The novice to automated authority control may also be disillusioned to learn how limited it is due to the technological constraints of vendor-supplied systems. Another drawback to this manual is that it does not deal with standard procedures for the establishment of local authority records. For this the best guide is still Robert Burger's *Authority Work: The Creation, Use, Maintenance, and Evaluation of Authority Records and Files* (Libraries Unlimited, 1985).—Richard E. Asher, *Indiana State Library, Indianapolis.*

Bibliographic Records: Use of Data Elements in the Book World. By Lorcan Dempsey. BNB Research Fund Report, no.40. Bath, England:

Centre for Bibliographic Management, Bath University Library, 1989. 56p. paper, £10 U.K.; £12 overseas (ISBN 0-86197-085-3).

Originally commissioned by the British National Bibliography Research Fund, this report marks the growing community of interest among publishers, booksellers, and libraries regarding the production and use of bibliographic information. Author Lorcan Dempsey regards the work as exploratory; it is, perhaps, the literature search and informal survey of needs that precedes the more thorough research he hopes will follow.

The role of automation is key to the project, and it is the growing exchange of electronic information that prompts Dempsey's study of the data elements needed in bibliographic records because they support all the functions performed by publishers, booksellers, and libraries. This is not an analysis of the MARC formats but a generalized tracking of automation in Britain's pub-

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lishing houses, booksellers, and libraries; a superficial listing of users for the bibliographic record; and a comparison of the uses among the three groups.

Dempsey's focus is primarily on bibliographic description, content description, and subject data. He notes that all records need common descriptive elements for identification but that publishers and booksellers have been most in need of content description to support the promotion and selection of books. The library world has been increasingly interested in incorporating content description into bibliographic records and in enhancing subject access. The data elements appropriate to these three descriptive areas are considered in light of the various functions performed by publishers, booksellers, and libraries. The result is a matrix, which also indicates the level of importance of each data element.

Some key aspects of bibliographic control are not included in the study—the control of holdings for resource sharing, for instance, or questions such as timeliness of records, or costs and mechanisms of access to records. Nonetheless, it is a useful overview. Particularly important is the consideration of standard setting and systems description that goes beyond discussion of library needs only and takes aspects of the larger information industry into account.—*Suzanne Striedieck, North Carolina State University, Raleigh.*

Cost-Effective Technical Services: How to Track, Manage, and Justify Internal Operations. Ed. by Gary M. Pitkin. New York: Neal-Schuman, 1989. 292p. paper, \$39.50 (ISBN 1-55570-041-1). LC 89-12229.

The content of *Cost-Effective Technical Services* is based on a 1986 Resources and Technical Services Division (RTSD) preconference to the American Library Association (ALA) Annual Conference, with additional information incorporated by the editor. The book is intended as "a response to

the pressing need to solve the complex problems of achieving and maintaining cost-effective technical services" (p.v), by answering the questions, "How can a manager best utilize cost-effectiveness studies? How is cost-effectiveness determined? How is proper methodology applied, and why is it necessary? What have other libraries done to monitor and contain costs? Should standards be developed?" (p.v).

The book has three sections, each with an introduction, as well as a bibliography and two indexes. The first section, "The Need for Costing: A Necessity or Superficiality?" presents three articles about cost study methods, applications, and analyses, with five short responses to issues raised in the papers. The second section contains eight descriptions of studies of acquisition, public catalog, serials, and general technical services costs in public and university libraries. "Standardization," the third section, includes articles about comparative cost analyses in Great Britain and in the United States. The annotated subject bibliography covers library literature published from 1970 through 1988 concerning cost methods and applications, with selected citations to business and economics literature. There is both a general index and an index to the authors of publications listed in the bibliography.

Cost analysis in librarianship and particularly in technical services is not an unstudied area, as is emphasized by the 313-item bibliography, which itself supplements the 853-item *Management and Costs of Technical Processes: A Bibliographical Review* (Richard M. Dougherty and Lawrence E. Leonard, Scarecrow Press, 1970). The questions raised here by the editor and addressed, however articulately, by twenty-four authors add little that is new, other than recent cost studies, or insightful to the literature. There is always an administrative requirement to steward human and other resources well. Administrators who manage libraries using data analysis, especially in technical areas,

have a variety of valid theoretical and methodological sources from which to proceed and are aware of the applications and limitations involved. We are beyond hypothetical models that condescendingly and contradictorily declare "Other staff might have been transferred, but these people were retained in cataloguing because they were useful and/or well-liked, and they carried the basic load for the operation" (p.35).

Revisiting existing information is ineffective for both persuaded and unpersuaded readers. Instead, librarians must now resolve the difficult questions (including several raised here by Paul Kantor) involved in the overall quality of service we provide to patrons, such as the cost-benefit of immediate or remote access to information, the cost of overlooked or outdated information to research, or the cost of reference service error. We should be well beyond such oblivious declarations as "There are many ways to classify a library's activities, but from a costing point of view, a simple two-category classification is enough: service and support activities, and mission activities. The library itself consumes the outputs of service and support activities; the library's users consume the outputs of mission activities. Book acquisition is one of the former; reference service is one of the latter" (p.10).

The audience for this book will be librarians and library school students who are not immersed in the existing literature and librarians who build exhaustive collections in librarianship. Its usefulness to those conversant with professional issues is in the convenience of the bibliography.—*Charlotta C. Hensley, University of Colorado at Boulder.*

Music Cataloging: The Bibliographic Control of Printed and Recorded Music in Libraries. By Richard P. Smiraglia. Englewood, Colo.: Libraries Unlimited, 1989. xxii, 222p.

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Not to be confused with the author's *Cataloging Music: A Manual for Use with AACR2*, 2d ed. (Lake Crystal, Minn.: Soldier Creek Press, 1986), which, as the dog-eared copy at hand reveals, is truly an essential and practical manual for current cataloging practice, this later work is a milestone in the literature of music librarianship: an extended historical and theoretical treatment of the development of American music cataloging practice. No less important a contribution is Smiraglia's compilation of relevant "Suggested Reading" at the end of every section, as well as the final "Selected Bibliography" (p. 203-209), which together satisfy a need long felt by those few who teach and write in this field.

Written in clear prose primarily as a textbook "designed to introduce the field of music cataloging to students of music librarianship, students of cataloging, and/or music librarians, or general catalogers who find themselves in need of a basic explanation of the prevalent practices in the bibliographic control of music materials" (Preface, p.xi), it is easy to recommend this book to both the beginning and the advanced music cataloger. Although the introduction does provide an overview of the subject, the author assumes a "good grounding in bibliographic control," and also an "understanding of the history, theory, and performance of Western art music," as well as a sympathy for other kinds of music.

The first three chapters concern descriptive cataloging and access, the next three, subject analysis (including classification systems), and the last four, issues of information manipulation and retrieval (including content designation, authority control, filing practices, and printed and online catalogs). Each of these broad sections begins with an historical introduction from which the description of current practices clearly emerges. Not since Isabelle Cazeaux's fine essay, "Classification and Cataloging," written for the Music Library Association's *Manual of*

Music Librarianship, edited by Carol June Bradley (1966), have we had such a cogent presentation of both issues and bibliography. Significantly, Smiraglia can no longer entertain Cazeaux's notion of collection-specific cataloging practices because of the ubiquitous use of national databases requiring standardization of these practices. Equally significantly, the topic has matured to merit book-length treatment. The library community is fortunate to have been so well served by this author.

Smiraglia regards this work as a treatise, even a manifesto, urging the formulation of empirical understanding and testable theories about the bibliographic control of music materials leading to more appropriate design of computer-based retrieval systems for music. To that end, areas for further research are noted throughout the volume. Given the present state of vendors' systems, we can only hope that present and potential music catalogers will accept his call. Smiraglia has just initiated a round-table within the Music Library Association to provide both incentive and forum for these discussions, a further indication of the seriousness of his mission. As a member of the faculty at Columbia University's School of Library Service, he already is seeing to it that his students pioneer in these studies. We await the results with great interest.—*Mary Wallace Davidson, Eastman School of Music, University of Rochester, New York.*

Operations Handbook for the Small Academic Library. Ed. by Gerard B. McCabe. The Greenwood Library Management Collection. Westport, Conn.: Greenwood Press, 1989. 349p. \$49.95. (ISBN 0-313-26474-0). LC 88-34811.

McCabe's *Operations Handbook for the Small Academic Library* is designed as a companion to his *The Smaller Academic Library: A Management Handbook* (published in 1988, and reviewed in *LRTS* 33 (1989):91-92), and has a similar arrangement. It is divided into seven parts, with twenty-seven individ-

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ual chapters; most, but not all, of the contributors are librarians with background in small academic libraries. Of the seven parts, all but the section on public services have some relevance for technical services librarians.

The first section on administration is directed primarily at head librarians. However, Edward D. Garten's chapter on cost data works with issues that affect all of us; for example, his section on "Costing an Additional Workload" discusses costing gifts and gives sample proposals and tables to present to a college administration.

In the section on personnel, D. E. Williams's chapter, "Designing Jobs for Changing Libraries," is especially insightful. He warns against aping the hierarchies of large academic and research libraries—while reorganization is an obvious means of dealing with new technologies, too many hierarchies may be awkward and confusing within a small staff. Moreover, library positions must be continually redefined as the persons within them develop skills and maturity and as the work environment changes. The other personnel chapters, covering recruitment of librarians, staff training, and student workers, do not cover new ground, but may still be helpful in their common sense approaches.

Some of the chapters on technical services include basic discussions of information already known to most practicing technical services librarians; however, those on allocation formulas and conservation programs are informative. D. G. Schappert's chapter on allocation formulas demonstrates a profound understanding of the realities of small campus politics; moreover, while he does not promote any one formula, he thoroughly discusses the advantages and disadvantages of several. C. T. Naslund is convincing in her arguments that small-scale conservation programs—including disaster planning—are possible and necessary even within strict budgetary constraints.

The chapters on technology, especially that on electronic book ordering,

are unfortunately, though predictably, already out-of-date. However, the theoretical and background information remains useful.

The five chapters on materials selection present a perceptive assessment of collection selection and management, and of the important role of college faculty in those processes. Again, most of the information is not new; in fact, some of the chapter on "Selecting Monographs" was already treated in earlier chapters on "Allocation Formulas" and "Conservation Programs." J. A. Hastreiter's chapter, "Guidelines for Periodical Acquisition and Budget Control," has a lively discussion of the constant need for evaluation and reevaluation of titles, and various approaches to deselection. While the chapters on periodical acquisition are informative, all overlap to some extent. Media selection is discussed within the framework of an overall collection development policy.

The handbook concludes with R. S. Karp's excellent bibliographic essay that "summarizes the major changes and choices that are the reality of academic librarianship today" (p.313), and, in fact, summarizes the book itself. Each chapter also includes useful bibliographical references; there is a good index.

Like all collections, there is some unevenness in style and content, as well as overlaps; and some of the detailed factual information, especially with regard to the newest technology, is already dated. However, within these caveats, the *Operations Handbook* will serve as a reference source for library school students and other librarians interested in the small academic library, or for librarians interested in exploring areas outside their own expertise. Most academic library literature continues to be geared toward large university and research libraries; McCabe is to be applauded for his second addition to the work of librarians in small academic environments.—Mary Margaret Benson, Linfield College, McMinnville, Oregon.

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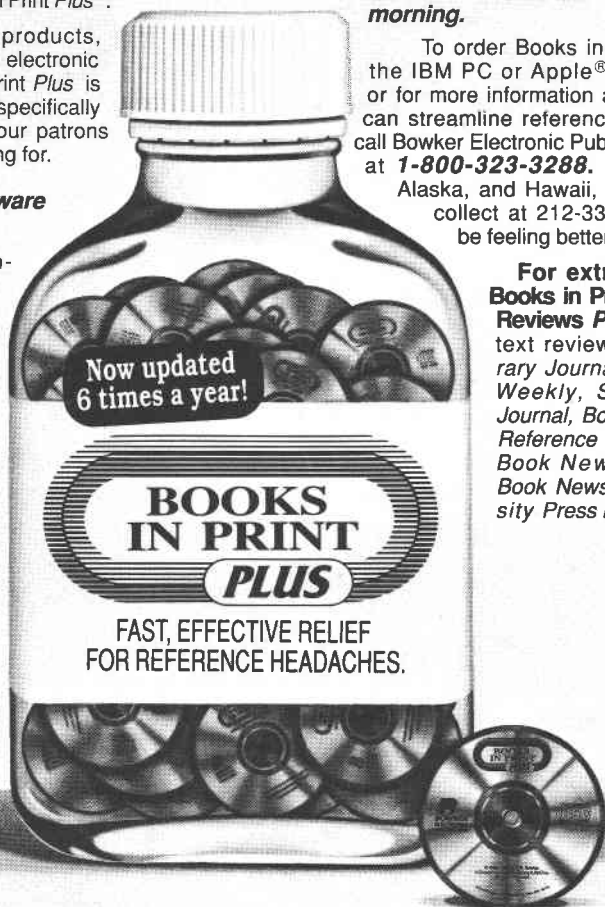
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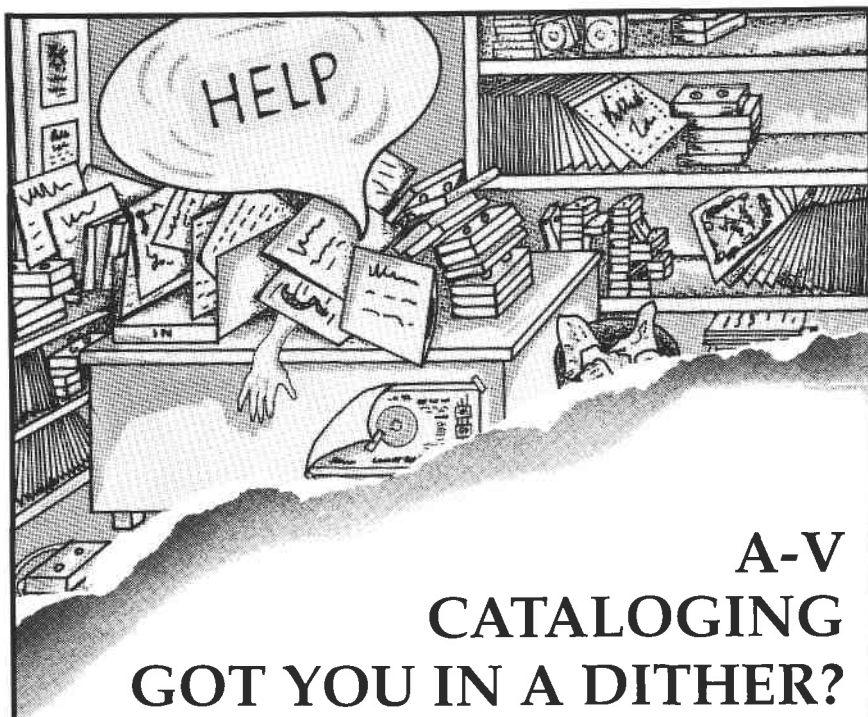
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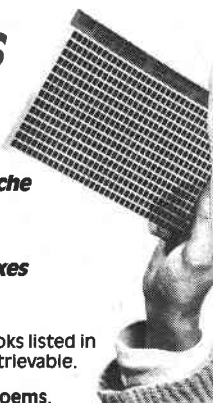


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